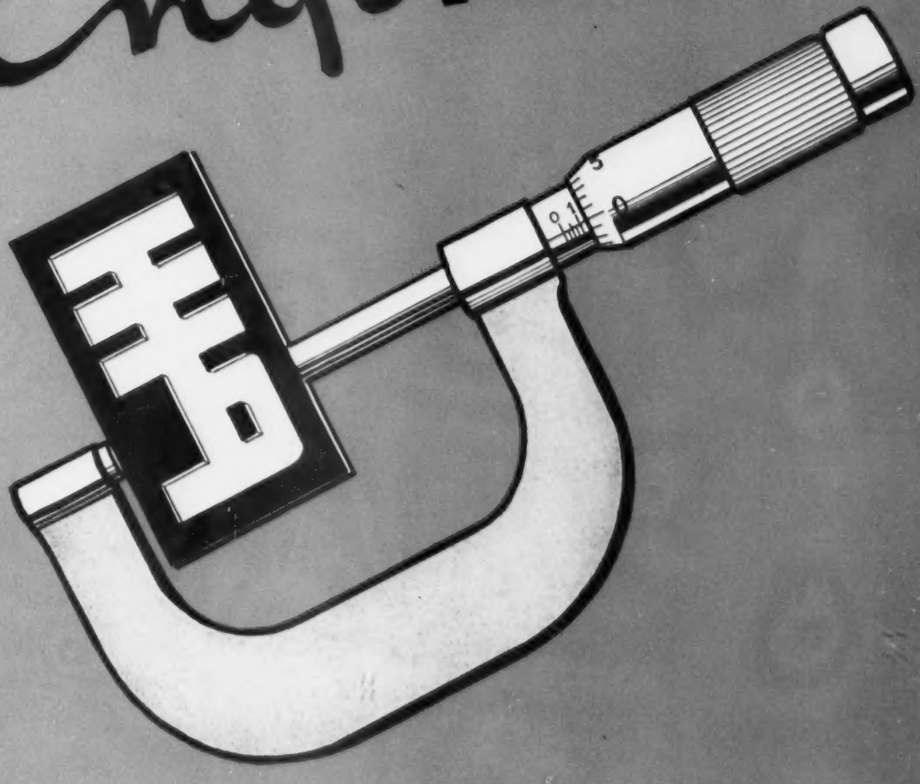
Printing Equipment Engineer

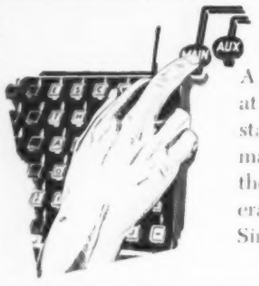


MARCH, 1941

A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY

BLUE STREAK Mixers Pay Dividends

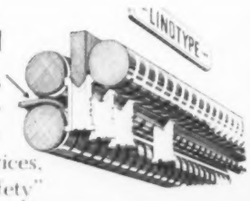
with effortless, speedy operation and a minimum of maintenance. Simplicity of design and construction—easy control of machine adjustments—fast, uncomplicated operation are the foundation of BLUE STREAK LINOTYPES.



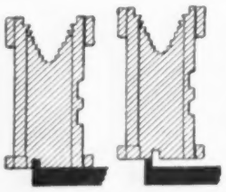
The Key Does It!

A simple light touch of the key, at the right of the keyboard, instantly changes the source of matrices from one magazine to the other. No interruptions of operating tempo with Key-Mixing. Simple, fast, positive!

Automatic Matrix Guard



Impossible to shift if matrices are on the distributor. The feeler bar moves out before each shift. If it touches matrices, it prevents the shift. This "safety" action is entirely automatic. Nothing to remember—*nothing to watch except the copy.*



No Motion to Complicate

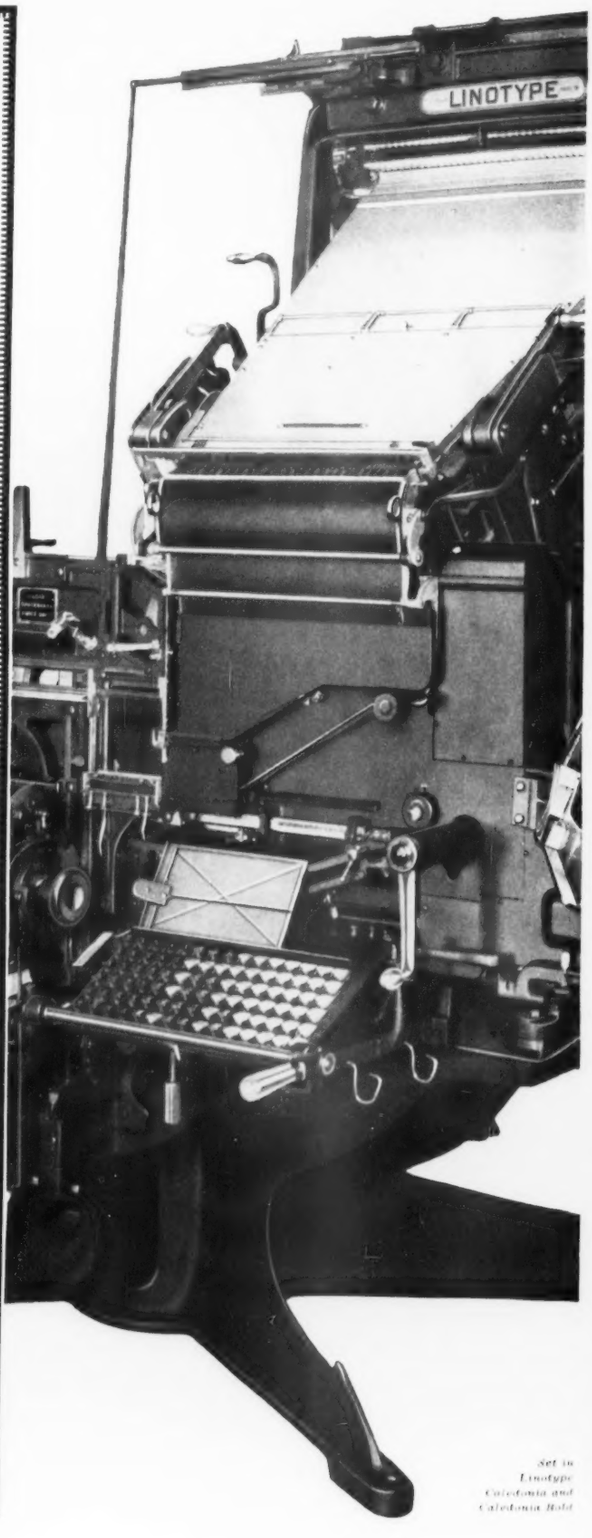
If the bridge fits, the matrix goes to one magazine—if it doesn't, it goes to the other. No moving parts to slow down distribution or complicate maintenance. Another example of *Linotype Simplicity!*

One-Turn Shift

1½ seconds from one pair of magazines to another. Fastest, simplest method of shifting magazines. Counterbalanced elevating shaft makes action effortless. No complications in maintenance or operation. Simple, easy, fast!

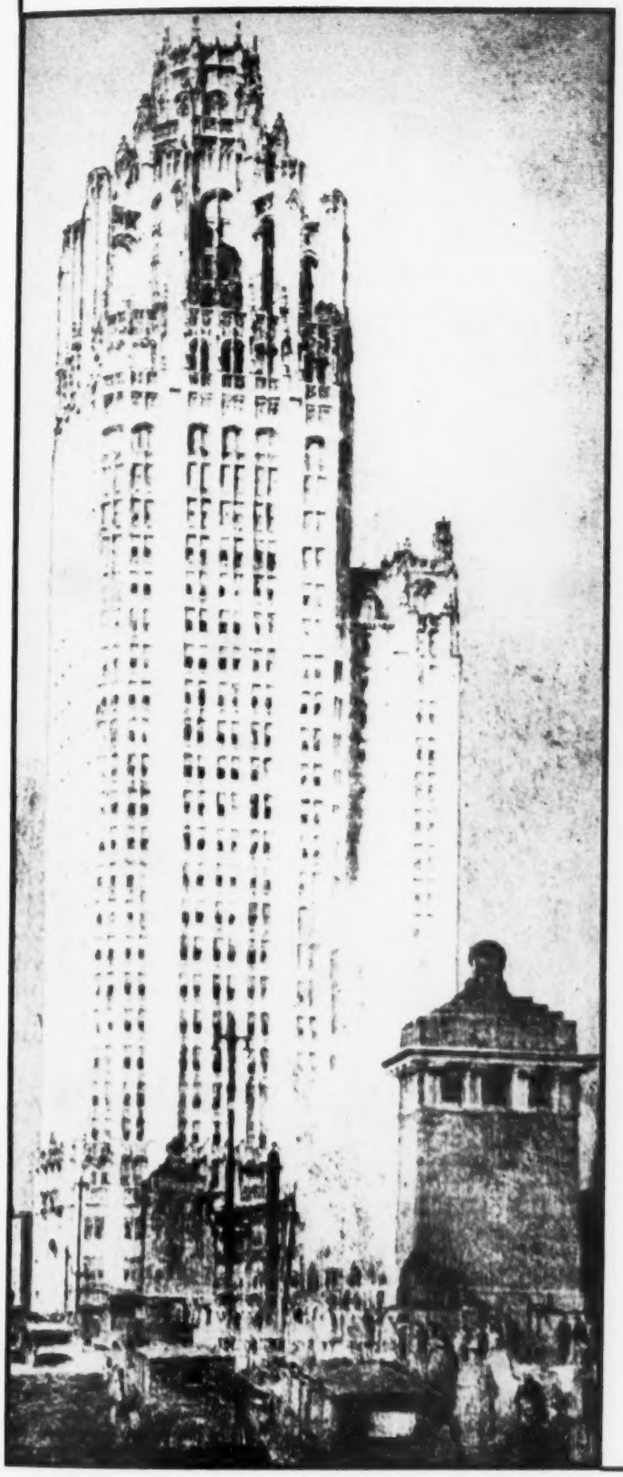
THE CHANNEL ENTRANCES never move from their operating position when Linotype magazines are "One-Turn" shifted. No motors—no levers—no complications. Shifting time is cut in half.

TRADE LINOTYPE MARK

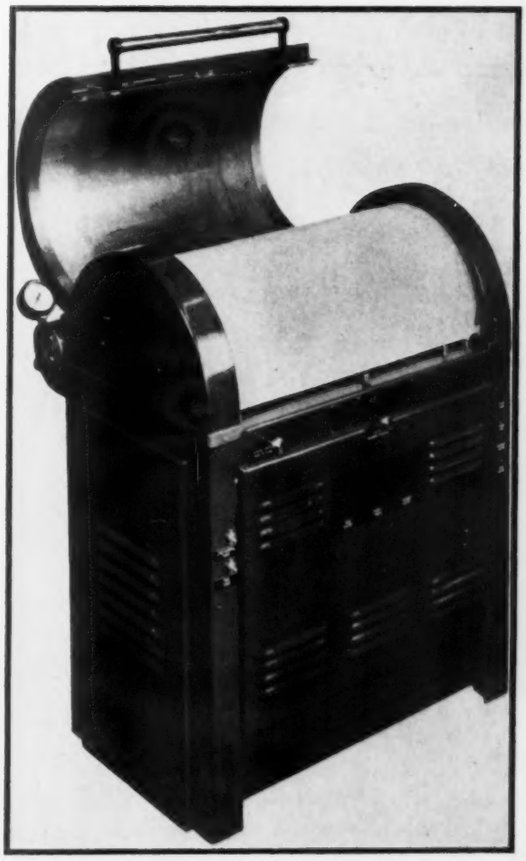


Set in Linotype Caledonia and Caledonia Bold

CHICAGO TRIBUNE ORDERS 4 STA-HI MASTER FORMERS



THE MACHINE THAT DELIVERS



STA-HI CORPORATION

1020
CROCKER STREET
LOS ANGELES, CALIFORNIA

WHAT THEY ARE THINKING ABOUT

— *Industrial Executives state their "wants" as being desirable in printing industry*

BELOW we are printing a partial list of "wants" selected from among those proposed for all industry by more than a thousand industrial leaders to Research Advisory Service of which Bert H. White, of Buffalo is Director. First, perhaps it would be best to explain what the Research Advisory Service is. The "wants" printed here have reference only to the printing industry. The Service is maintained by a group of American banks and has the voluntary cooperation, so it reports, of more than eight hundred industrial research laboratories to enable manufacturers to find the answers to their practical working problems.

In printing this list of "wants", *Printing Equipment Engineer* does so without taking recognizance of the fact that perhaps some solutions already have been provided for some "wants."

The list of "wants" is taken from 44 page condensation of a 375 page manuscript which was compiled from the answers received from industry in general by Research Advisory Service, and are as follows:

Adhesives — In the photo-engraving field, adhesives are needed to hold the printing plate direct to the wood block without tacking.

Dyes and Colors — A white ink for printing on dark colored corrugated board with rubber plates; if an ink could be developed which would lie on the surface of newsprint without striking through, it would enable us to produce a cleaner printed newspaper; odor-free inks would be particularly useful for labels for food and confectionery.

Electrical Equipment — More efficient carbon arc lighting equipment for preserving the delicate details of type in the process of transferring the photographic image to the metal plate; vari-speed electric motor which will give constant horsepower output at any of its variable speeds.

Paper — A chemical, non-volatile at steaming temperature, and soluble in water, to add to ground wood pulp which will prevent its changing color during steaming; an inexpensive method of coloring paper on the paper machine; a practical process of de-inking printed papers to make the pulp available for remanufacture into white paper; increase the whiteness and permanency of groundwood papers with particular regard to fading in the presence of light; if newsprint manufacturers could produce a sheet free of the roughness caused by the screen in the Fourdrinier papermaking machine, a better printed newspaper would be possible.

Printing — A machine to set type by photo-electric technique so that copy for offset printing may be prepared without the casting and makeup of actual metal type; a process to eliminate the present heavy expense for three-color halftone plates and make possible the printing of color reproductions in short runs; a new type of base for halftones to reduce expensive makeready in letterpress printing; in glass tableware, we need a decal-comania for simulating hand painting that can be run in lehrs at about 1050 deg. F.

Research in Printing Inks

Further improvement in printing speeds, particularly in field of flat-bed printing; increased replacement of natural products by synthetic, and advances in fundamental information

By DR. WILLIAM F. TALBOT*

*Research Director of General Printing Ink Corporation, New York, N. Y. Abstract of address given before G.P.I.'s Printing and Advertising Clinic, February, 1941.

IN contrast with many other research activities, organized and directed research efforts in the field of printing inks comprise a relatively new undertaking.

Early printing inks were borrowed from the allied arts of painting and decorating and were not basically different in principle from many printing inks in use today. The improvements up until relatively recently were embodied through hit and miss experimentation or continued generous borrowing from the associated arts.

One of the first industrial fields to be thoroughly organized for research was the so-called coal tar dye industry. Through this related research many contributions to printing ink were made, particularly in the direction of brighter, stronger and a wider range of colors. More recently printing inks gained through research on the vehicles of paint and varnish.

The early technical efforts directly related to printing inks were undertaken without the benefit of professional research. The first chemists employed in printing ink research were relegated to testing and color matching and were hampered by lack of modern organized laboratories and the benefits of collaboration and planning.

This situation has been gradually remedied until today well planned and balanced programs have replaced the earlier sporadic efforts.

It is difficult to evaluate research results and it is generally recognized that research programs must be viewed in terms of long range over-all results. The graphic arts have benefited from printing ink research in such directions as greatly increased printing speeds; marked improvement in reproduction; gradual improvement in such qualities as scratch and rub resistance, and resistance to adverse conditions such as alkali, light and aging; and elimination of complaints such as plate wear and fill-up.

In the field of new developments, we may expect a still further improvement in regard to printing speeds particularly in the field of flat fed printing which has fallen behind web fed rotary; increased replacement of natural products by synthetic; and many advances in our fundamental information concerning the relationship of various ink properties to the particular printing processes. Where this latter information may take us is of course impossible to predict although it is safe to say that its net result will be improvement in some respect.

Timken Shifts Personnel

F. H. Lindus, formerly Los Angeles Branch Manager of the Timken Roller Bearing Company, has been transferred to the home office at Canton, Ohio, where he is engaged in General Sales Promotional work.

L. J. Halderman, Branch Manager of the Chicago office, has taken Mr. Lindus' place, while Jack Gelomb, formerly Detroit Manager is now in the Chicago office.

Joe Jesseph, salesman in Portland, Oregon, branch, has taken Mr. Gelomb's place in the Detroit Office.

Paper Color Selector

Peninsular Paper Co., Ypsilanti, Mich., has published a folder containing 103 swatches of its various kinds and colors of book, offset and cover papers. Company states: "Paper selection often starts with color. The Selector enables you to pick colors from stock papers." A keyed index permits quick identification of a particular color swatch.

RADIANT Ludlow's new and original typeface family

Here is a wholly new and original typeface family, produced by Ludlow, which is gaining greater favor every day with typographers and buyers of printing.

And Radiant's mounting popularity is well deserved, too, for the design combines modernity in style with a high degree of legibility—features difficult to find in any single typeface.

Ludlow Radiant, because it looks like no other typeface now in use, imparts to printed advertising a note of freshness and novelty which proves a real asset in promoting sales of style merchandise.

There are four series in Ludlow's Radiant family: the Medium, the Bold, the Bold Extra Condensed, and the Heavy, affording an interesting variety of weight and width.

Legibility gained from contrast in weight of strokes in conjunction with the simplicity attained by absence of serifs make Radiant an ideal modern typeface family for distinguished up-to-the-minute advertising and commercial printing.

Ludlow Typograph Company, 2032 Clybourn Avenue, Chicago

This attractive booklet showing all sizes of the Radiants in practical use will be gladly sent you if requested on your business letterhead.

Ludlow Radiant Medium

ENSEMBLE
Suit for Fall
36 Point

STRIKING NEW
Style for misses
24 Point

Ludlow Radiant Bold

RADIANT
Is popular
36 Point

NEW EFFECTS
With this face
24 Point

Ludlow Radiant Bold Extra Condensed

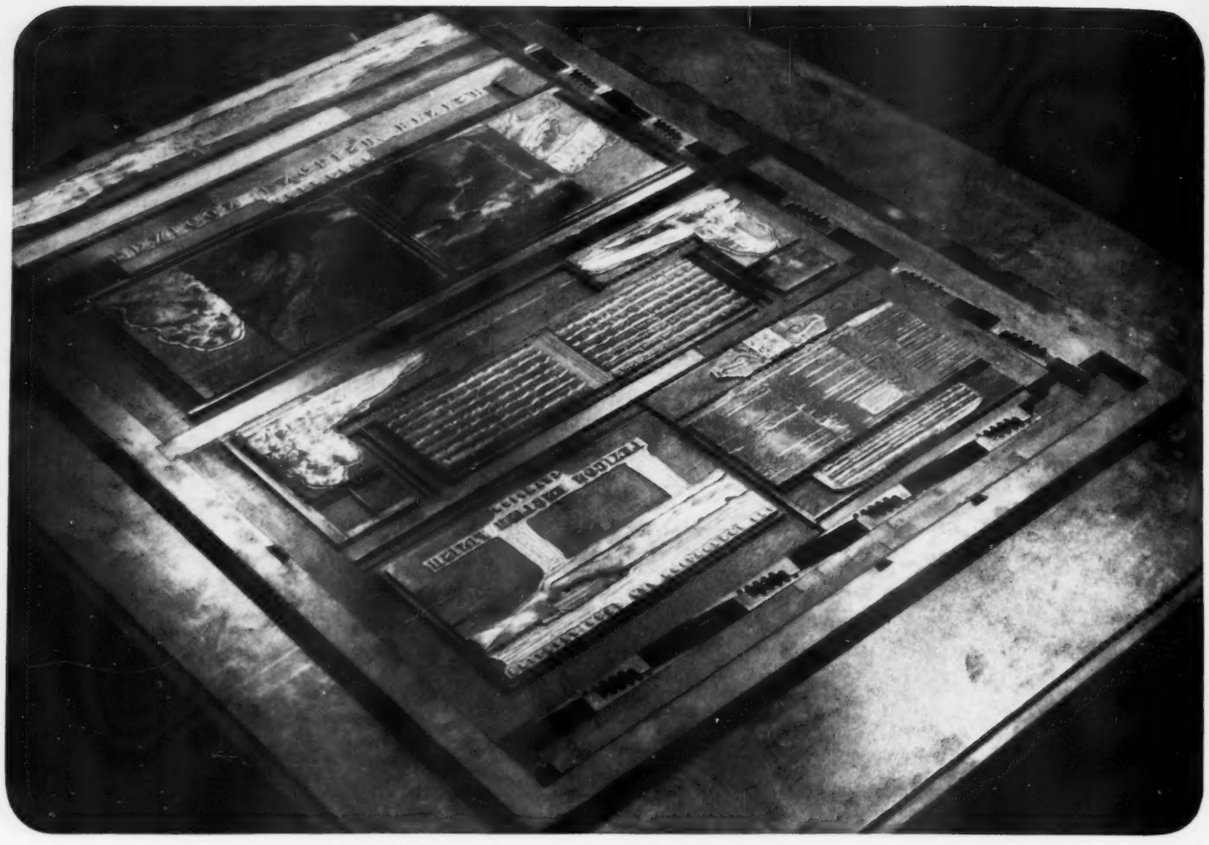
PRINTER PROFITS
From newer faces
36 Point

TALL SVELTE LETTER THAT
Pleases the connoisseurs
24 Point

Ludlow Radiant Heavy

DESIGNS
New face
36 Point

ADVERTISES
Greater value
24 Point



It Never Can be a Salesman
UNTIL IT GETS ON PAPER

HOT ideas, eighteen carat art, and sterling typography are mighty important ammunition in any campaign. But the indispensable motorized division that takes them up where they can see the whites of their eyes, and gives an advertiser the chance to grab off some orders, can be only one thing . . . *paper!* In today's mighty push for profit, give your customers the best there is—Champion paper. Because of greater values, splendid service, and completeness of the line, printers and advertisers long ago made Champion the largest producers of printing papers. Whether you send sales ammunition forward on coated or uncoated book, offset, cardboard, envelope, postcard, or all of them—dump the whole load on Champion!

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

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- **HANDBOOK FOR PRESSMEN — By Fred W. Hoch.** Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts. $3 per copy, cash with order.
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Send All Orders With Remittance to

PRINTING EQUIPMENT Engineer

1276 W. Third Street
Cleveland, Ohio

TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.

Printing Equipment Engineer

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MARCH, 1941

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Will increase your profits by time saved with the Kluge Automatic Press

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Fastest Magazine Press Ever Built!

20,000 Cylinder Revolutions per Hour . . . GUARANTEED !

● To meet the demand for faster magazine production, Goss has developed this super-speed, anti-friction press that enables publishers to cut press time and observe later deadlines for both editorial and advertising copy.

The design of this press permits high speed production while maintaining the highest standards of printing from web rotary presses. Anti-friction bearings are used wherever practical throughout the press. Plate, impression, and folding cylinders are mounted in pre-loaded precision roller bearings, designed to take the thrust load from the driving gears and definitely locate the cylinder in a fixed running position.

Plate and impression cylinders are solid steel forgings. The inking carriages are movable, and all rollers are ball bearing. Roller adjustments are handled from outside the press. The press is equipped with oil-tight guards and circulating lubricating system.

The Goss Anti-Friction Magazine Press has the latest design pin point and gripper collecting jaw folder, either straight-away or right angle delivery. The folder may be equipped with imprinting device or stitcher mechanism for stapling the finished product.

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SAN FRANCISCO: 407 Call Building

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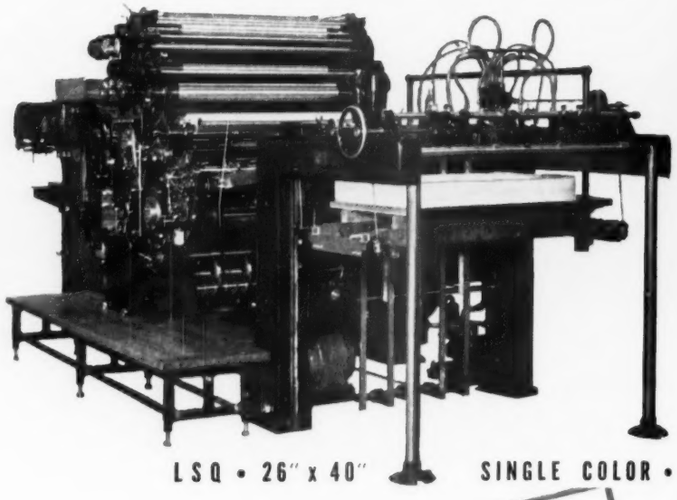
TO YOUR PRESSROOM

will Increase Your Market

● The addition of Offset to your printing methods is a definite step toward expanding your market because today's market recognizes the advantages of Offset.

In choosing Harris, you set your standard of production as high as Offset craftsmanship can provide. With Harris, you adopt Offset at its best; you install equipment made by the pioneer builders of successful Offset Presses.



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Through research, Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

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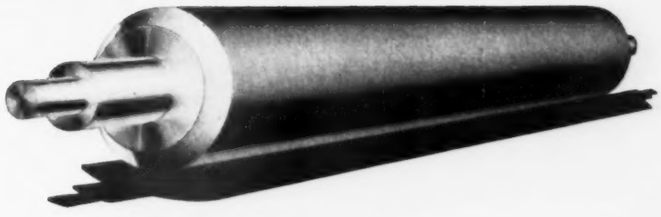
Daycos Never Let YOUR Pressroom "LAY AN EGG"

With Daycos, the original and leading synthetic rubber rollers on the job, your pressroom will never bog down or "lay an egg" when rush jobs are on the hook. Daycos take Mondays in stride—never get Spring fever during days of changing temperature—never need to be pampered. Always away in a flash, Daycos keep going to outperform ordinary rollers on every turn, outlasting them by as much as 4 to 1.

For millions and millions of impressions Daycos retain their face—prevent delays and minimize "down time." Tough and rugged, Daycos resist cuts and abrasions to give you



first quality work at lower-cost-per-month-of-use. What's more, these all-season, all-purpose Daycos are tailored to the exact plasticity that *your* work requires. Get the one and only genuine Dayco Roller with renewable surface (Re-Daycoing) feature that's typical of every Dayco—and say goodbye to production blues.

THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO
The Originators and Pioneers of Synthetic Rubber Printing and Lithographic Rollers
CANADIAN REPRESENTATIVES:
Manton Bros., Ltd., Elizabeth Street, Toronto

Dayco Rollers

THE ORIGINAL AND PIONEER SYNTHETIC RUBBER PRINTING AND LITHOGRAPHIC ROLLERS

THE ALL-PURPOSE ROLLER FOR D FORM, DISTRIBUTOR, DUCTOR, ETC.

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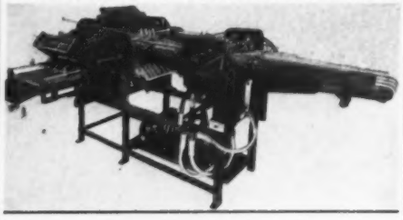
DAYCO
PATENTED RENEWABLE SURFACE

CAN BE APPLIED TO ANY METAL STOCK

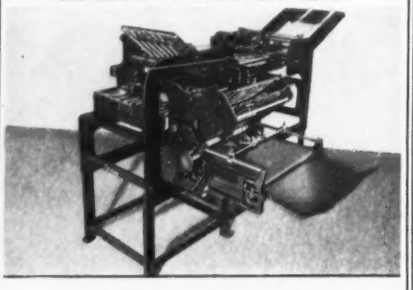
You're LOOKING AHEAD *when you*

LOOK *at a* CLEVELAND

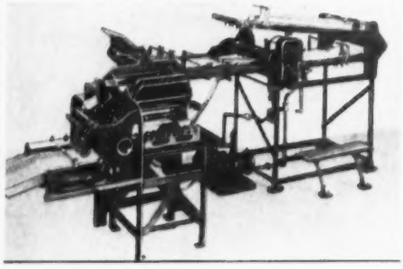
CLEVELAND "W" CONTINUOUS FEEDER



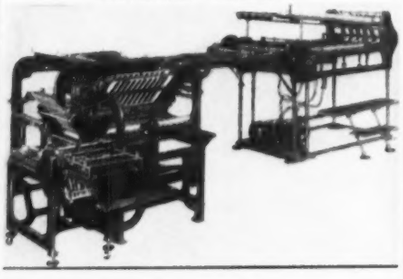
CLEVELAND "W" FRICTION FEEDER



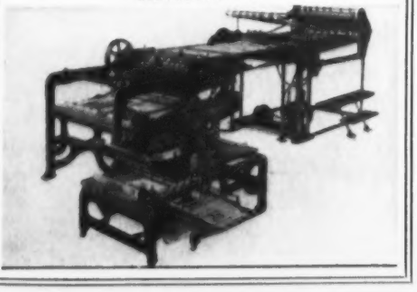
CLEVELAND "DOUBLE-O"



CLEVELAND "DOUBLE-M"



CLEVELAND "K"



Thanks to the high standards set by Cleveland Engineers, the four Models of Cleveland Folders illustrated here not only meet present day folding needs . . . they are designed and built to meet FOR YEARS TO COME the demand for Wide Variety, High Speed, Range of Sizes, Convenience of Operation and Durability.

AHEAD IN VARIETY OF FOLDS

Each CLEVELAND Model makes practically every type of fold ever needed in the largest sheet it will fold—right angles, gang work, parallels, multiple signatures or single signatures.

AHEAD IN PRODUCTION

The New CLEVELAND Models operate at speeds 50% faster than older models. This feature, together with the continuous feeder—no stops for reloading—assures hourly production far in advance of any other folder.

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When you are ready to buy a CLEVELAND, you have the choice of four sizes. You can select the size that will handle your work to best advantage, and give you the most operating time.

AHEAD IN OPERATING CONVENIENCES

CLEVELANDS are simple and quick to adjust and operate—hinged deflector on each fold plate, thumb screws for roller tension; diagonal roller feed table and cross carriers, universal stackers and fold plate gauges, all adjustable without tools.

AHEAD IN DURABILITY

CLEVELANDS have a reputation for long service. Precision built—bronze bushings at wearing points—engineered for continuous high speed operation.

BEFORE YOU BUY

It will pay you to LOOK AT A CLEVELAND. Ask for literature—ask for a representative. It costs you nothing to get the FACTS about the CLEVELAND. No obligation.

CLEVELAND SIZES

"Double-O" 4 x 6" – 22 x 32"	Model "W" 3 x 4" – 14 x 20"
"Double-M" 5 x 7" – 28 x 58"	Model "K" 10 x 12" – 39 x 58"

Dexter Folder Company, Pearl River, New York

NEW YORK, 330 West 42nd Street · CHICAGO, 117 West Harrison Street · PHILADELPHIA, Fifth and Chestnut Streets · BOSTON, 185 Summer Street
CLEVELAND, 2391 Fenwood Road · ST. LOUIS, 2082 Railway Exchange Building · DALLAS, J. F. Carter, 5241 Bonita Avenue · SAN FRANCISCO, LOS ANGELES, SEATTLE, Harry W. Brintnall Co. · ATLANTA, Dadson Printers Supply Co., 231 Pryor St., S.W. · DENVER, A. E. Heinson, 1441-47 Blake St.

PRINTING EQUIPMENT
Engineer
March • 1941

DEPRECIATION — *Its ABC*

For the production executive who is vitally concerned with its importance in sound plant operation —Those old machines won't look so valuable once you understand their effect on profits

By FRED MERISH*

*Pompton Lakes, New Jersey.

"WHY should we increase production costs with depreciation charge-offs on new equipment when our old equipment is in good shape?" asked the mechanical supervisor of an Eastern printing plant almost belligerently when approached to modernize the printing equipment. His query, typical of many others we have heard, signifies an erroneous state of mind prevalent among mechanical executives who dislike to replace old equipment with new because it means increased annual charges for wear, tear and obsolescence, or, as is sometimes the case, the old equipment in use carries no depreciation expense because it has been written down to scrap value in prior years. It also signifies the need for better synchronization with the facts, otherwise, modernization programs will not come to fullest flower and, with business already in high gear, it is important that all production executives in the Graphic Arts industry inventory their mechanical equipment now if they have not already done so. An executive in this industry is short-sighted if he foregoes the bigger sales and profits possible with new printing equipment just because he assumes that the resulting charge for depreciation will increase production costs when, as a matter of fact, old equipment curtails sales and increases overhead expense in more ways than one, so that these deficiencies exceed the depreciation charges brought into being by the purchase of new equipment. With production increasing in many plants and assurance of a steady run for many months because of defense appropriations, machines are going to depreciate faster than before. A machine must be in tiptop condition to stand the gaff in the days to come.

Probably no other element of production has been covered in so many different ways in books, articles and speeches. This copious data on depreciation has done more to confuse than clarify the muddy waters. During the next few years it won't be hard to sell goods and services but it will be hard to make a profit on sales unless managerial efficiency is tops, unless the front office cooperates with the production department and vice versa toward a favorable solution of all operating problems, one of which is the subject of this monograph — depreciation. If not handled properly, profits will be affected adversely, hence, those in charge of production, where wear, tear and obsolescence actually take their toll, should know something about this subject and cooperate systematically with the front office in the best interests of the business. It is to provide production and mechanical executives with a better understanding of depreciation that we dedicate this paper. We shall discuss the fundamental of depreciation in a manner, simple and understandable so that production and mechanical executives, with the basic factors clear in mind, will be better able to cooperate with general management.

For easy assimilation, depreciation may be divided into three main classifications: (1) Its purpose; (2) Its compu-

(*Continued on Page 13*)

EDITOR'S NOTE:

This article by Fred Merish is not a sermon. We're not recommending that you read it in the same spirit as the mother who gave her little son a dose of castor oil because "it was good for him."

For those mechanical executives who consider obsolescence and depreciation mysterious subjects or ones which they feel may tarnish their personal plant administration ability, we recommend a thorough study of the principles set forth in this article.

This is a simple explanation which will demonstrate that depreciation records, properly kept, are an aid rather than a stumbling block to efficient plant supervision.

EMPLOYMENT
AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

MECHANICAL SUPERINTENDENT or PRODUCTION MANAGER — That gooey combination of soot, varnish and oil is ineradicable when it's in a man's soul or his chromosomes; and combined with ambition, character, high ideals, vision, creative ability and 24 years experience as a competent typographer, foreman and superintendent, makes an ideal combination. That's the story of this young man, under 40 years of age, who has a complete understanding of employe-employer relations; will give any organization well-planned, articulate supervision. From tending a pot-bellied stove at fourteen, up through the ranks, he has educated himself with a keen, alert mind, and has the mental acumen and constructive thinking of an expert typographer,

or

will consider opening as understudy for a responsible position with large publishing plant interested in employing a younger man with excellent background and training—a former employer.

Especially good in foremanship; fine character and capabilities—The Roycroft Shops.

Printer of old school; recommended highly to anyone seeking good Supt.—Time Pub. Co.

Capable, industrious printing executive of highest type—C. P. Co.

Reply Box 120 *Printing Equipment Engineer* or P. O. Box 10, Batavia, N. Y. Personal interviews only.

DESIGNING ENGINEER — Many years experience, wishes position with lively organization developing new ideas and improving present product or to supervise production in a publishing house. Age 50, American, married, of good habits. Reply Box 121.

WANTED—Position on larger daily by steady, sober, married photo-engraver, expert in all engraving operations. Now employed as head of engraving department on medium sized paper. Reply Box 122.

WANTED—By Eastern Magazine Publisher—Trained man up to about 35 years of age with manufacturing and technical control experience in the paper industry and practical printing experience. The man must be able to analyze printing troubles due to paper, and correlate the information so that it can be presented to the paper mills. Methods must be established to see that paper standards are maintained. In reply give full information which will be handled by us on a confidential basis. Please have all replies sent to R. W. Edwards, Employment Division. Reply Box 123.

MACHINIST-FOREMAN — Machinist, Linotype, Ludlow, Elrod, auxiliary equipment; electrician; general plant structure, layout, maintenance. Twenty years experience covering production, coordination, maintenance, composing room, pressroom, engraving. Experienced foreman newspapers, job shops, combinations. University trained industrial organization, management. Young man, union. Reply box 124.

LETTERS
TO THE EDITOR

Volume Advertiser Already Recognized

Dear Editor — I read with interest your editorial on newspaper "service costs" in the February issue of *Printing Equipment Engineer*. It seems to me the case has been stated plainly enough, but there are a few additional thoughts which ought to be brought out at this time.

You speak of the seven or eight revised proofs of advertisements which have been furnished by newspapers to advertisers. This doesn't tell the worst side of the story. In some instances, in our composing room, we have found it cheaper to throw the original composition in the hell box and reset the ad entirely rather than try to correct the proof as marked by the advertiser. Is there any justifiable reason for the necessity of doing this?

Some time ago, our firm looked into the matter of making a reasonable charge for reconstruction costs. At this time, one of our volume advertisers remarked critically that inasmuch as his firm was one of our paper's largest advertisers, we ought to permit reconstruction time as before without charging for the time. Our general manager's reply to this was: "We have already recognized the big advertiser by granting reduced rates because of the volume of business he is doing with us." —B. M.

Surplus Machinery

Dear Editor — You discussed only two sides of the situation in the newspaper "service" editorial in the February issue of *Printing Equipment Engineer*. The third side is that of the equipment manufacturer. If publishers generally start charging for advertising reconstruction costs, it seems to me there will be a considerable amount of used equipment thrown upon the market, by reason of the fact that advertisers, rather than pay for reconstruction costs, will eliminate them and thus there will be no need for some of the equipment which is now in daily use in newspaper composing rooms. This will help to augment an already ample surplus machinery condition in the industry. —J. A. K.

Editor's Note — In the editorial, we stated: "... this reconstruction service is going to be a contributing factor to the passing of more newspapers unless something is done to eliminate it." In other words, on the one hand, unless publishers charge for reconstruction work, more newspapers will pass out of the picture and additional machinery will be released at forced sale; on the other hand, if newspapers do charge for reconstruction work, there may be some surplus equipment thrown upon the market. In either case, anyone can understand that surplus equipment will be thrown upon the market.

While we are not speaking for the equipment manufacturers and have no authority to do so, we don't believe the manufacturer exists who holds the uneconomic idea that newspapers should give away a portion of their business, when that gift is robbing them of the income, part of which should be set aside for the purchase of equipment essential to sound production.

Have New Titles

Vice President E. P. Hamilton, of Hamilton Manufacturing Company, Two Rivers, Wis., has announced the appointment of W. A. Duboc as Sales Director, Printers' Equipment Division. Coincident with announcement of Mr. Duboc's new responsibilities, Mr. Hamilton stated that Howell G. Evans who has been sales manager for other lines of the company's business has now been made treasurer and general sales manager. In connection with his duties as manufacturing executive of the company, Mr. Hamilton expects to travel considerably about the country.

Wm. A. Duboc, well known in the printing fraternity, is now Director of Printers' Sales for Hamilton Mfg. Co.

DEPRECIATION

(Continued from Page 11)

tation; (3) Its handling from an accounting standpoint. We will elaborate on these classifications in the order named.

Why Depreciation?

The purpose of depreciation is twofold: (a) To include the depreciation charge in overhead or direct departmental costs so that the cost of the machine, pro-rated over its life, or an allowance for a contingency may be recovered in the selling price; (b) To record gradual decreases in machine values. In our field studies, we have found too many cases where printing plants fail to charge off any depreciation at all, assuming that since their equipment is paid for, these charge-offs to profit, which are internal charges, hence, mere bookkeeping entries, will not affect current income or net worth. Some production executives are for this procedure because it keeps down production costs, makes it look as though the production manager is aces in efficiency. But, the omission of depreciation from production cost makes the business shortchange itself because the estimators do not charge customers enough for the printing they buy. Eventually, this amounts to the same thing as giving away the cost of machinery, fixtures and other assets in short selling prices.

Effect of Non-Depreciation

For example, if sales are $100,000 this year and overhead expenses without depreciation total $35,000, the overhead-to-sales ratio to be used in computing selling prices is 35%.

On the other hand, if overhead expenses plus depreciation total $40,000, the overhead-to-sales ratio is 40%, hence, in figuring margin of profit or spread without the depreciation expense included, management will not charge enough for its product, but will cut net profit 5%, which may be enough to put the company in the red. To get profitable selling prices, one must consider the percentage of overhead expense to sales and if this percentage is reduced through the omission of depreciation expense, the selling price will be reduced accordingly. This shows how important it is to include depreciation in production costs.

Why Depreciation Should Be Charged Yearly

The other reason why depreciation should be charged yearly concerns its reduction of asset value. Working assets, such as machinery, fixtures, delivery trucks, buildings and accounts receivable depreciate from wear and tear and from other factors. By making annual charges for depreciation, allowances for bad debts and other contingencies, management reflects this toll by reducing these asset values yearly. The fact that cash is disbursed in a previous year for machinery is no reason why each subsequent year in which it is used should not bear a proportionate part of this outlay. Whether a working asset is bought for cash or on installments has nothing to do with the depreciation charge, neither is the charge limited to the year of purchase. As to net worth, it is inflated if machinery or any other asset is shown at original cost. Too many plants have old equipment on their books at original cost prices, whereas, it is worth little more than scrap value and should be modernized. Their statements show a bloated net worth because they have never written down their working assets with annual depreciation charges.

How It Affects Production Costs

Since depreciation is a cost of production, it naturally should hold interest for mechanical executives but we find from our field experience that few production men give it more than passing thought. They consider it a front office figure, a mysterious something arrived at by the head accountant. Occasionally, a production executive will discuss depreciation with the front office but it isn't a general policy. It should be. Remember that the computation of depreciation is always an estimate. There is no way to calculate it to the penny. Other costs can be reduced to dollars and cents but not depreciation. We have never known a case where the depreciation charges at termination of the write-downs have equaled the original cost on the books, whether or not salvage value or trade-in value was considered. This is all the more reason why production executives should get together with those that set the rate. If the rate is too high, production costs will be excessive and quoted prices will be so high that they scare away business. If the rate is too low, production costs will be too low, sales will be priced too low and profits will be nil. Certainly, the men in charge of printing production, who know their machines like a mother knows her babies, should be helpful in preparing a schedule of depreciation rates that will approximate actual wear and tear as accurately as possible and prevent possibility of loss.

Separate Mechanical Unit Designed To Trim Line-Composing Machine Slugs

A PATENT has been granted to Paul Fluger of Hamburg-Wandsbeck, Germany, by the United States Patent Office on a separate mechanical unit for trimming or shaving line-composing machine slugs to size in one operation after complete cooling. The intent of the inventor seems to be to provide a machine for performing a finishing operation. Three knives are so arranged in stationary position in the machine that one knife shaves the bottom of the slug to type high; another removes any fin or draw from the top part of the constant side of the slug, and the third knife trims the ribs to bring the slug to point size.

The trimming operations are accomplished by urging the slugs against three stationary knives which are positioned in such a way that they remove metal from the slug with a shear cut. While the means for adjusting the knives for proper trim and to point size are not apparent in the patent specifications, no doubt the means for obtaining these adjustments have been provided by the inventor.

Without going too much into detail, the design of the machine is as follows: A table with smooth metal top plate is provided. This may be set up on a bench or other working surface. Extending from one end of the table to the other, a chain is mounted on two sprockets which are driven by suitable power. The sprocket shafts extend through and are mounted vertically in relation to the horizontal table top so that the travel of the chain is parallel to it.

At suitable intervals throughout the length of the chain, small projecting lugs extend outwardly. As each lug in the revolving chain is presented before one end of a row of slugs resting in regular upright position at one end of the table, it engages the end of the first slug and urges it along a narrow channel. In succession, as the lug on the chain moves the slug along, one knife at the back of the channel trims off the fins or projecting draw (if any) at the top of the constant side of the slug; a knife mounted in the table base plate trims the bottom of the slug, and the third knife trims the slug ribs to bring the slug to the wanted point size. All knives are mounted at an angle to the travel of the slugs through the channel.

The row of slugs to be trimmed is urged against a stop by a weight suspended on a chain in such a way that immediately the first slug has been fed into the channel, the entire row of slugs is moved forward against the stop so that the first slug likewise is ready to be moved into the channel by the next approaching lug on the chain. While each knife is performing its trimming operation, a pad under spring pressure bears against the slug surface opposite the knife.

After the slugs have been trimmed, their travel in the channel is continued until they reach an inclined shelf or galley attached to one end of the table. This shelf is similar to the conventional galley on line-composing machines. It is provided with a jogger which moves each slug sufficiently to clear the path for the next slug to be delivered into the receiving galley.

Apparently, it is intended by the inventor to provide a lip over the top of the channel through which the slug passes, so that while the slug is passing over the bottom knife the lip will provide a bearing for the printing face of the slug. In other words, the distance between the lip and knife edge is 0.918 in. or the proper type high distance of the country in which the machine is being used.

The Straight-line Method

"How do you compute a fair rate?" is a question frequently asked by production executives. There are 10 methods of computing depreciation but only one, the Straight-line Method, is well adapted to the Graphic Arts industry. For income tax purposes, the Internal Revenue Department recommends this method and 90% of the business organizations in this country, from the corner grocery to the Croesus utility, use the straight-line method. It is the simplest in application. The original cost of the machine is divided by its years of useful life, the result is the annual depreciation charge. For example, a machine costing $10,000 with 10 years of useful life, will depreciate $1,000 yearly.

Use Care In Setting Rate

Care must be taken in setting the rate on new machinery. Production executives and management should get together with machinery manufacturers in estimating profitable life. If the rate is set too high or too low, the production records will not reflect true cost. In making the estimate, remember that you must consider profitable life, usefulness or capacity, not mechanical life. An old machine may be in good condition mechanically but is unprofitable to operate. Many plants are sheltering equipment that is mechanically passable and economical but, being old and obsolete, it cannot turn out a top volume of quality work. If depreciation charges are geared to the mechanical limit of equipment, which may be far beyond profitable life, the rates will be inadequate and the user must either scrap the equipment prematurely and take a loss on depreciation or use the machine until it shoots its last bolt and then take a licking through high cost of operation, unsatisfactory output and lost trade.

Scrap or trade-in value cannot be considered when fixing the depreciation charge. When the equipment is eventually scrapped or traded in, an adjustment accordingly may be made on the books, but in most cases, this value is nominal unless the asset is fairly new and traded in for a larger unit before it has lived its profitable life span.

Reducing Installment Method

The "Reducing installment method" is sometimes used, wherein depreciation falls heaviest in the early years on the assumption that a machine is second-hand in three months and would sell for half its cost, hence, the heavier charges in early years, but depreciation measures the service of a machine, not its market value. The average printing plant must be considered a going concern and its costs handled accordingly. Then too, this method would swell costs and selling prices abnormally, increasing sales resistance and decreasing profits.

Depreciation Rate Varies

Depreciation varies with the machine or groups of machines. It is unwise to average a rate for all machines. The production executive should keep a record of each machine, its age, cost, depreciation schedule and present value, making a periodical survey to determine if book value approximates actual appraisal value. If not, general management should be consulted and steps taken to adjust differentials. Wise production executives will check the condition of their working assets against depreciated book values to see if the write-downs are in agreement. This should be done at least twice yearly.

Give Machinery Good Care

The care given machinery is a factor. Unless you keep your machinery in good condition, checking it over periodically for defects, it may depreciate more rapidly than estimated.

Two Kinds of Obsolescence

Obsolescence, in some cases, complicates the annual write-down because a machine may grow obsolete before it wears out. The continuity of profitable operations are best assured by scrapping obsolete equipment to maintain proper production. There are two kinds of obsolescence, that which is predictable with reasonable accuracy and the accidental kind, unforewarned and therefore in the nature of a loss. Obsolescence may be considered with depreciation or separately. If it seems that an asset will grow obsolete before its profitable capacity mechanically has been terminated, consider obsolescence when fixing the depreciation rate.

Effects of Production Speed-up

Excessive speed-up of production means higher depreciation and obsolescence. Production executives whose plants are feeling a marked increase in business should make sure that production costs are carrying an increased depreciation charge, otherwise, the prices quoted may not cover actual wear and tear to the company's loss. Some machines will operate efficiently for 10 years, running 10 hours daily but only 5 years running 24 hours daily. If original depreciation schedules are based upon equipment operated 8 hours daily and business demands necessitate working it 16 hours daily, obviously, it will wear out twice as fast and the charge should be increased accordingly.

Plants now on defense operations will charge off depreciation as high as 30% yearly and will complete amortization of expansion programs in a very short time. This explains why manufacturers erecting defense plants did not rush to obtain certificates of amortization by February 5, 1941, the original deadline for filing. At normal rates, working 24 hours daily, defense plants will amortize in 3 or 4 years, which is as fast as the government will permit write-offs, even under the special amortization plan. Before the defense speed-up, plants were operating about 40 hours weekly, averaging an 8% depreciation expense. Obviously, the rate will skyrocket when plants operate 24 hours daily, 7 days a week.

Production executives in printing plants should check their depreciation schedules now to make sure of taking sufficient depreciation allowances while profits are high, rather than take a chance at getting credit for these allowances when profits drop because there may not be enough profit in later years to allow for adequate depreciation deductions and the difference may represent a loss in tax and lead to other difficulties. When assets are written down completely, depreciation ceases.

Don't "Bloat" Assets

Never increase the original cost of an asset. Its market price may increase but this does not warrant the taking of appreciation. The tendency will be for machinery prices to rise with business uplift but users should not increase book values to reflect this condition. This would automatically increase the annual depreciation charge and may raise costs unduly.

Depreciation An Internal Charge

Finally, we come to the third classification of depreciation: its handling from an accounting standpoint. It is a direct charge to the department housing the equipment, in the same category with shop payroll, power and light. However, it is distinctly an internal charge because there is no outlay of funds, the offsetting credit to a reserve for depreciation. The production executive will do well to check over the reserve accounts covering machinery to determine whether the accumulated depreciation lines up with actual wear and tear.

Depreciation and Net Profit

Some time ago we analyzed figures covering 377 printing plants of all sizes. Depreciation ran from $3.46 to $6.55 for every $100 in sales, the average being $4.56. During the same period, the average profit for the industry was $4.54 for every $100 in sales, indicating that depreciation on equipment runs as high as net profit and deserves equal consideration.

Depreciation Should Be Recovered In Product Price

Depreciation is the measure of the loss of property utility and value consumed in production, which should find its way into operating costs, so that it is recoverable in the price of the product. *It is current value consumed in producing the product and this loss should be paid by the customer.* Thus, depreciation is clearly a matter of production and something for production executives to mull over. In the past, this chore has been left too much to the front office and as a result, costing has been inaccurate, prices out of line and losses materialized. It is suggested that all mechanical executives consider depreciation as much in their province of supervision as the maintenance of production schedules or repairs to machinery.

EQUIPMENT *and Supplies*

Challenge EK Paper Drill

The Challenge Style EK Paper Drill has been developed for the shop having a wide variety of work to do but no extremely large quantities of any one kind at a time by the Challenge Machinery Company. It is a foot-power paper drill that drills, drills and slits, or drills and V-slots in one operation, and can also be equipped to do round cornering and to

Challenge Machinery Company's EK Paper Drill for shop having wide variety of work but no extremely large quantities of work to be done. Drills, drills and slits, or drills and V-slots. Special attachments for other kinds of work are available.

cut Kalamazoo and many other types of U openings. The range of round hole drilling is ⅛ to ½ in.

An electro-vacuum chip disposal whisks all chips into a steel container to eliminate possibility of chips, litter, or paper dust getting into the mechanism in the base of the machine.

The Drill is equipped with the Challenge automatic trip gage which enables the operator to drill all holes without removing his hands from the stock. A fully automatic gage is available as extra equipment.

This drill also has as standard equipment the Challenge Flexolite which illuminates the work table, black composition No-Glare table top, and ball bearing drill spindle. The automatic trip gage has six stops mounted on a square guide rod with an etched steel Lufkin scale.

Straight slitting and parallel slotting attachments and cornering attachments, Kalamazoo and other strap binder openings requiring special attachments are available.

X-acto Knives for Graphic Arts

In describing the X-acto Knife for use by pressmen, photo-engravers, lithographers, artists and silk screen craftsmen, Mark Kirstein of the Mark Specialty Co., 89 Westminster Rd., Rochester, N. Y., stated that the knife is made in three sizes, one with 5/16 in. diam. knurled metal handle, one with 7/16 in. diam. knurled metal handle, and a third knife with ¾ in. diam. plastic handle. A feature of the knife is that there are eight standard detachable blades of various shapes which may be inserted in or removed from the chuck. The chuck itself is of the spring collet type and holds the knife blade securely. Knives may be secured singly or in sets of two or three sizes. The knife blades are made of surgical steel.

Further information about X-acto Knives may be obtained from Mark Specialty Co., direct, at the address given above, or through *Printing Equipment Engineer*.

The Simco Ionizer

The Static Eliminating device shown in the accompanying illustration consists of three transformers, a rectifying tube, and three Simco "Neutrastats" mounted in an iron box, 8 in. by 8 in. by 15 in. On the left of the box is a two-pole attachment plug for 110 v., 60 cy., a. c. The wire coming out of the side of the plug is to be attached to ground. On the top of the unit is a single-pole, two-piece connector, the male portion of which is attached to the static bar shown above. The female portion is the outgoing terminal of the Ionizer power unit.

The static bar above the power unit is a standard Simco open-type static bar with fibre disks to protect the points from mechanical damage, but the Simco metal-encased static bars are most frequently used with this unit. The bar is usually provided with 15 ft. of cable and is supported in such a position that the points of the bar are directed toward the material to be discharged, the distance from the points of the bar to the material being about 12 in. Where material to be discharged is moving very slowly, this distance may be increased to a few feet.

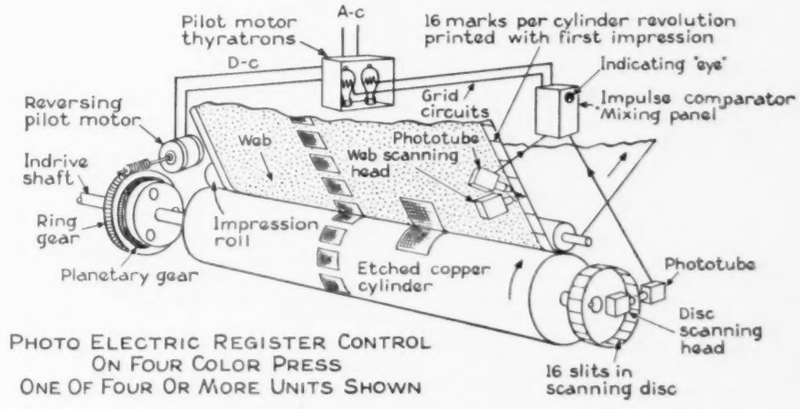
The Simco Ionizer utilizes the method of electrically propelling static charges out into space. A static field is produced

Second Color-Register Control

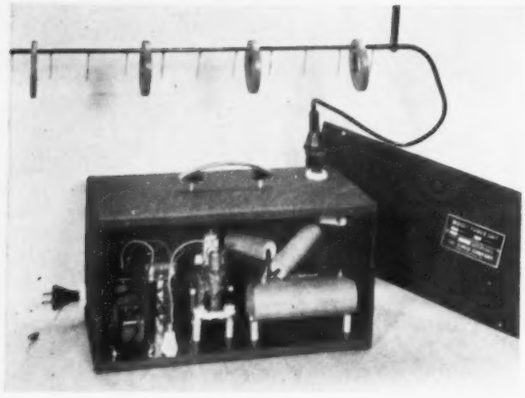
A second installation of four-color register control will be made on another rotogravure press of the Philadelphia *Inquirer*. The first installation, made more than a year ago, has cut waste expense from about 7% to approximately 3%, resulting in an estimated saving of $15,000 per year.

Developed by General Electric, this system of control automatically maintains register of four colors within permissible tolerances at web speeds of approximately 1000 ft. per min. The control system employs two photoelectric scanning heads for each color unit. One head scans the margin of the web on which register marks are printed at the time the first color impression is made; the other scans a disk attached to the printing cylinder.

As the press revolves, the relative position of the web and printing cylinder are compared photoelectrically and the necessary corrections are automatically applied. These corrections are accomplished by a reversible pilot motor so geared to the cylinder-driving mechanism as to alter the angular displacement of the cylinder with respect to the preceding impression.



Schematic diagram of four-color register control for rotogravure press in plant of the Philadelphia Inquirer. *Manufacturer states that by automatic check and adjustment at each gravure color unit, this photoelectric system assures continuous register. This multi-color register control detects misregister immediately and automatically applies correction. Photoelectric scanning and comparison devices at each color keep a continuous check at running speed.*



View of Simco Ionizer, which utilizes method of electrically propelling static charges out into space. Fibre disks on static bar protect the points from mechanical damage.

equivalent to that of 100,000 v., or more, d. c., and only a few thousand volts are generated by the Ionizer to accomplish this.

The Ionizing bar, mounted over top of the delivery box of an overlapping layboy in a paper mill, neutralizes the charges above the pile as they are being generated and greatly aids in laying up light weight papers evenly and smoothly at high speed. In paper coating plants and rubber spreading plants, where highly volatile solvents are used, large areas in the region of the fountain may be kept practically free of static charges. On the winder in the throwing mill, static charges in acetate yarn may be destroyed at almost the instant they are generated.

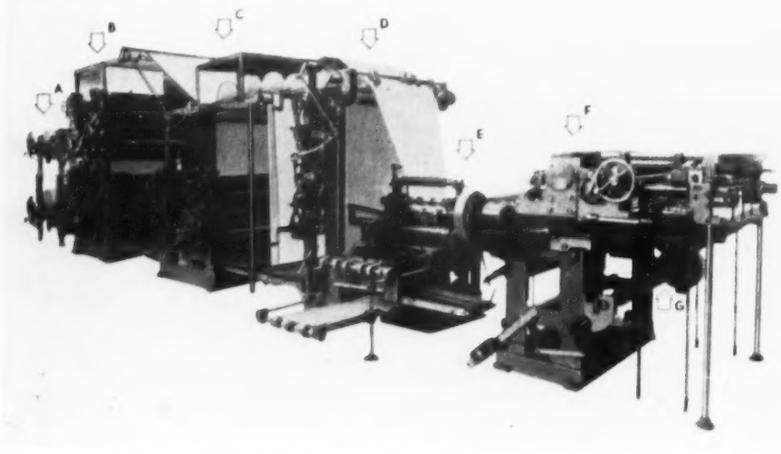
Newspaper, Magazine and Book Press

WHAT is said to be the largest and most flexible web-fed offset unit yet constructed by the Webendorfer Division of American Type Founders has been completed recently. The machine is a combination newspaper, magazine and book press, but may be used successfully for commercial work. Built to handle a maximum 35 in. web, the press is equipped at present to lithograph three colors on each side of the web in one operation. Provision has been made for the addition of another offset unit which will permit lithographing four colors on each side of the web.

The press is also equipped with a dual interchangeable rubber plate imprinting unit. This unit actually contains two rubber plate impression cylinders which may be operated alternately. While one cylinder is in operation, the other can be made ready, and vice versa. The change-over from one cylinder to the other can be made without stopping the press.

Provision has been made to feed the press from two separate rolls of paper simultaneously. Thus operated, the machine will lithograph one color on each side of both webs of an 8 page full-sized newspaper.

The delivery is equipped with a cutterhead, cutting off a 22¾ in. sheet which may be delivered flat or folded by a combination newspaper and magazine folder. The delivery carries a rewinder which may be used in place of the cut-off.



ATF-Webendorfer Six-Color Web Offset Press—The various component parts of the press are identified as follows: A is the double paper stand; B is the double-deck printing unit for lithographing two colors on each side of the web; the third printing unit is indicated at C—lithographs third color on each side of the web, with provision for extra deck to print four colors on each side; D is the double imprinting unit for rubber plates; the combination newspaper and magazine folder is shown at E; F is the cutter head and flat sheet delivery, and at G is indicated the rewinder.

A feature of the unit is a quick-change device which has been installed on both plate and blanket cylinders. The drive mechanism is operated by means of large worm units mounted on anti-friction bearings. A 30 h. p. motor is required to operate the machine, which is equipped with automatic lubrication to all main bearings.

The machine is claimed to lithograph, fold and deliver in flat sheets at 10,000 sheets an hour. The press was built primarily for the production of newspaper comic and picture supplements of the magazine type, but it is expected that it will be used for other work, including books, rewound labels and so on.

Extinguisher Hose

The Fyr-Fyter Company has standardized upon a special type of hose for use on Fyr-Fyter fire extinguishers, according to an announcement made by Resistoflex Corporation.

On the hand fire extinguisher illustrated pressure for discharging the chemical charge is provided by two air pumps operated tandem.

It is estimated that the Resistoflex PVA hose installation will yield from fifteen to twenty years of service. A specially compounded PVA tube (flexible synthetic resin, basically of Polyvinyl Alcohol composition) is utilized for the construction of this Hose. Since PVA is distinguished by complete inertness to hydrocarbons, the tube is unaffected by carbon tetrachloride, and does not harden, check or crack due to aging, corona, or other service conditions.

This tube is reinforced by a single fabric braid and supplied with an outer covering of synthetic rubber. The hose remains entirely flexible under all atmospheric conditions and temperatures. For example, it is able to withstand cold in excess of 50 deg. F.

View of Fyr-Fyter Extinguisher equipped with PVA hose.

New Size Plate Machines

Stereotype Equipment Company announces the addition of two new sizes of its Reliable Rubber Plate Machines. Model No. 14x16 has a platen size of 14 in. by 16 in. Model No. 18x20 has a platen size of 18 in. by 20 in.

The Reliable Rubber Plate Machine is used in printing plants for duplicating forms. The entire operation of making the matrix and the rubber plate from the matrix in the printing or publishing plant can be executed on the machine.

KEEPING IN TOUCH

International Printing Ink

HERE'S A STOPPER

Here's a stopper! This color photograph, *Midsummer Refuge*, by Toni Frissell, first appeared in the July 15, 1940 issue of VOGUE, and now it has been reprinted in the new U. S. CAMERA ANNUAL 1941. Like so many fine publications, every issue of VOGUE and U. S. CAMERA ANNUAL, both the color and black and white, is printed with IPI inks. So is the U. S. CAMERA magazine. In addition, the ART DIRECTOR'S ANNUAL, A TREASURY OF ART MASTERPIECES, KODACHROME AND HOW TO USE IT, and other outstanding publications described in this issue of "Keeping in Touch" are examples of what can be achieved with IPI's process colors.

For fine color printing, use IPI inks. Remember that IPI's color leadership, won through years of comprehensive, *basic* research in the science of color and its application to printing, has produced inks that will help you to get the best results with color.

PROCESS INKS

Modern color printing is the result of contributions through the centuries from a veritable League of Nations—China, Holland, France, Germany and England and, finally, the United States.

Process printing as we see it today in this country has probably reached its highest state of perfection, considering the enormity of the production problem frequently involved.

One important factor in process printing is ink. The formulation of process inks must meet many exacting specifications, not only in color matching but in performance on the press.

Leadership in color research has given IPI an outstanding position in the field of inks for process printing. The Recording Spectrophotometer, a complex measuring instrument which was used first by IPI, makes it possible for IPI to establish

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'KEEPING IN TOUCH'

COLOR ODDITIES

- "Camouflaged" homing pigeons have been bred for use during war. They are gray mottled so as to blend into a cloudy sky without being easily detected.
- Red is still the commonest color used in advertising and printing (excepting black, which technically, is not a color at all).
- A red or orange package will look heavier and bulkier than a light blue or green package, according to some designers.

FREE IPI's pocket Color Guide, containing 108 color sheets, is very handy for printing salesmen to use. Drop us a line and we'll send you one.

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continued from preceding page

the mixing characteristics of process inks and to evaluate them in relation to the ideal subtractive primaries. With such controls, pigment research can be conducted intelligently and with the correct objectives in view. Process ink formulations are tested on large four-color proving presses which simulate actual pressroom conditions.

The graphic arts industry has shown its acceptance of IPI leadership by the large number of important color jobs which are printed with IPI process colors. Some of these jobs are shown on this page. We wish we could show the hundreds and thousands of books, magazines, packages, and pamphlets printed with IPI process inks.

Examples of color printing with IPI inks now on sale at book shops

THE COLOR PARADE OF FINE PRINTING

The color work in magazines, advertising literature, books, on posters, packages, and labels is a continuing tribute to the printing industry and to its craftsmen. Reproduced above are four examples of fine color work. All were printed with IPI process inks.

KODACHROME AND HOW TO USE IT A book full of remarkable Kodachrome color photography which found its way into a good many Christmas stockings this year. Printed by Condé Nast, entirely with IPI process inks.

NEW COLOR PERCEPTION TESTS, U. S. NAVY We mentioned this tricky color job before in "Keeping in Touch." Beck Engraving Company, New York and Philadelphia, produced these new color-blindness tests under the supervision of the U. S. Navy. IPI supplied the inks and did the intricate matching job required for 93 separate colors.

A TREASURY OF ART MASTERPIECES After a record-breaking first year, this remarkable ten dollar book is still a best seller. Some of the fine paintings reproduced here so faithfully may never be seen again as originals. Printed by Condé Nast for Simon and Schuster with IPI process inks.

U. S. CAMERA ANNUAL 1941 Published for the first time in two volumes, this "bible" of the camera enthusiast contains fine photographs reproduced in color and in black and white. Printed entirely with IPI inks.

INTERNATIONAL PRINTING INK, 75 VARICK ST. N.Y.C.

How to Cure a Grouch

FIRST SALESMAN—"Wow! He's in a tough mood this morning! Take my advice and come back tomorrow when he calms down."
SECOND SALESMAN—"Wish I could, but I've got to get his approval today on that big color job."

SALESMAN—"Well, here they are, Mr. Flint, our first proofs, right off the press."
CUSTOMER—"Hmpf! It's about time! What do you fellows do over there all day, play pinochle or listen to the horse races?"

CUSTOMER—"Not bad—in fact, pretty good. Those are swell colors—they really sparkle."
SALESMAN—"Gee, thanks, Mr. Flint."
CUSTOMER—"By the way, whose inks did you use?"
SALESMAN—"Oh, we always use IPI colors!"

This I. B. M. Typing Machine spaces letter characters proportionally according to width. The carriage moves the width of an "I" when the "I" key is depressed and the width of a cap "W" when the "W" key is depressed. The machine is all-electric in action.

Proportional Spacing Typewriter

In August 1937, announcement was made by Vogeltype Aligning Paper Corporation that International Business Machines Corporation had developed an automatic differential spacing printing typewriter. Nothing more was heard about the new development for planographic reproduction purposes, announcement having been made that the machine would not be marketed until after thorough test by actual use in the field.

Announcement has now been made that International Business Machines Corporation has introduced an all-electric, proportional spacing typewriter. At the present time, manufacturer states the machine is provided with special 12 point Roman Book type, or with a fine line type, similar to conventional typewriter type, for stencil writing or making multiple carbon copies.

The proportional escapement mechanism automatically allows space for each letter character according to its width, varying from 2 to 5 units of $\frac{1}{72}$ in. each. For example, the lower case "l" occupies but two units of space, while the capital "L" occupies four units, and the lower case "m" occupies five units of space. Previously, typewriters have allowed a uniform space for each letter character, regardless of width.

Spaces between words can be made of any width from one unit up. Two space bars are provided, one moving the carriage two units and the other, three units. Depressing both simultaneously moves the carriage five units. Single-unit spacing is obtained by depressing the two-unit space bar simultaneously with the one-unit backspace key.

Manufacturer states a page with the new proportional spacing machine does not show the characteristic vertical lines formed by the white space between the letters by the conventional typewriter. The 12 point book type is slightly larger than conventional typewriter pica, but, owing to the proportional spacing, occupies 15% less space. Approximately the same space is required for the 12 point book type as for ordinary typewriter elite. This type can be reproduced in size and still provide legibility and space savings are dependent upon the amount of reduction employed.

The type spacing may be expanded by pulling out a control button which automatically inserts one extra unit of space between characters. Expansion may be used for word emphasis and for typing headings.

All numerals on the proportional spacing machine have a standard spacing of three units so that they will line up vertically for tabular work. The keyboard is provided with an interlock system which prevents the colliding or piling of type.

The machine accommodates paper 11 in. wide, and imprints a type line 9¼ in. wide.

The part which the typewritten word has played in the history and development of the United States is as romantic and important as any single factor in our national life. From the time when the first crude typewriter was set up in the midst of a struggling world, typewriting has travelled through the land, as no prophet of old could have done, to sway the hearts and minds of men and help build a nation whose strength and wealth are the envy of the world.

Zinc etching reproduction of specimen of 12 point Roman Book Type as produced on I. B. M.'s All-electric Proportional Spacing Machine. As each letter character is typed, the spacing mechanism automatically allows space for each letter according to its width, varying from 2 to 5 units of $\frac{1}{72}$ in. each. Spacing between words can be made any width from one unit up to five units. It is stated that existing marginal aligning devices already on the market cannot be used because of the type of escapement and carriage movement employed on the I. B. M. Proportional Spacing Machine.

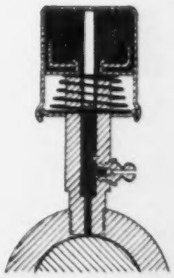
Ply No. 9

The Milburn Co. announces a new formula, known as Ply No. 9, specifically for industries where perspiration of the hands is injurious to both workers and products. Ply No. 9 is offered commercially in the form of a water-like colorless solution. The worker dips his hands into it and permits the moisture to dry on his hands. As it dries, Ply No. 9 forms a fine invisible film.

Manufacturer claims Ply No. 9 causes a rapid drop in the perspiration accumulated on the surface of the skin; it also tends to decrease the oily secretions of the skin and remove the alkalinity that occurs despite other precautions, and the coating on the hands is without detrimental effect to the body. It is also claimed that Ply No. 9 is easy to apply as well as remove, and does not penetrate the skin or react with basal living cells.

Ace Automatic Lubricator

Ace Lubricating Equipment Company states its Ace Self-feeding Grease Cup is for use on all types of bearings and equipment in printing plants, including applications where oil is now used. Through spring action, the cup is caused to supply grease automatically to the bearing. The position of the cup on its stem indicates whether the cup is full or empty. The feed can be adjusted to suit bearing pressure and lubrication demand by changing the feed spring. The grease is replenished with a gun, through a standard hydraulic gun nozzle. When filling the cup, a check valve closes when the cup is filled to prevent pressure from damaging the cup. Manufacturer states that because of its construction, the Ace Lubricator can be taken apart and cleaned readily.



Cross-section view of Ace Self-feeding Grease Cup half exhausted on bearing. Standard nozzle permits filling cup with grease gun.

Executives of S. N. P. A. Western Division meet in Fort Worth, Texas, to discuss mechanical problems — attendance reached 329.

IN general, the newspaper mechanical conference idea seems yet to be on the upward swing. Attendance at the third annual Western Division S. N. P. A. Mechanical Conference held in Ft. Worth, Tex., on Monday and Tuesday February 17 and 18, reached 329. At this conference, Pressroom Foreman Bert Conner of the Ft. Smith (Ark.) *Times-Record*, was elected chairman for the ensuing year, succeeding Photo-engraving Superintendent J. H. Gibson of the Houston (Tex.) *Chronicle*. Composing Room Foreman J. M. Lighett of the Beaumont (Tex.) *Enterprise and Journal*, was elected vice chairman.

A feature of the conference was the banquet on Monday for those attending the meeting. Equipment and supplier representatives were hosts to the mechanical executives. Treasurer Harold Hough of the Ft. Worth *Star-Telegram*, was toastmaster. Amon Carter, publisher of the Ft. Worth *Star-Telegram*, was honor guest at the banquet and spoke upon present-day world conditions.

Two highlights of the technical program were the addresses of two well-known executives from the Louisville *Courier-Journal* and *Times*. Production Manager M. George Martin addressed the conference on *Projection Control of Newspaper Revenue and Expense*. Composing Room Superintendent C. Frank Mann spoke on *How a Cost Control System Works in a Composing Room*. Both speakers illustrated their talks with charts and graphs. A special Mechanical Series S. N. P. A. Bulletin containing both addresses will be published at an early date.

Invitations for next year's convention were extended by Tulsa, Okla., Galveston, Houston and Dallas, Tex., executives. Production Manager R. J. Richardson of the Memphis (Tenn.) *Commercial-Appeal*, suggested that the Eastern and Western Divisions of the conference hold a joint meeting in Memphis, since an exchange of ideas between the two divisions would be helpful to executives in both divisions. The executive committee will select the next conference city at a later date.

Composing Room Technical Session

Mechanical Superintendent M. M. Bramlett of the Ardmore (Okla.) *Ardmoreite*, acted as chairman of the Composing Room section discussion.

The efficiency of makeup trucks or tables in the composing room was discussed. There did not seem to be general agreement upon the subject. Among those taking part in the discussion were Mechanical Superintendent W. J. Phillips of the Oklahoma City (Okla.) *Oklahoman* and *Times;* Composing Room Superintendent Claude L. Baker of the New Orleans (La.) *Times-Picayune;* Leven T. Deputy, Mechanical Superintendent of the Dallas (Tex.) *News;* Composing Room Foreman W. L. Caldwell of the Waco (Tex.) *Times-Herald;* Composing Room Foreman George Woodman of the Ft. Worth (Tex.) *Star-Telegram;* Stereotype Superintendent George Fuller of the Cleveland *Press;* Mechanical Superintendent John W. Dobbs of the Wichita Falls (Tex.) *Record-News* and *Times*.

Mr. Phillips stated: "We have gone altogether to steel makeup tables." He asserted: "The fact we do not have to hang 30 lbs. of material from our necks in an apron is sufficient cause to make me favor the tables." He thinks tables are handier and more economical and there are many advantages in the make-up department by having every form in its proper place.

In answer to a question asked by Mr. Baker, Mr. Phillips stated that the return of forms from the stereotype room was accomplished by four transfer trucks. Mr. Deputy expressed preference for form trucks as the result of having used both systems when the Dallas *News* and *Journal* were published in the same building.

S. N. P. A. Manager Walter C. Johnson added his testimony to the discussion by recommending the moving of the proof room away from the noise of the composing room and of the benefits received by installing dictionaries and style books for use by proof readers. Mr. Baker added that it is hard to find those who are able to concentrate sufficiently to catch all the errors that appear in type proofs.

One of the questions was related to the setting of type up to 36 pt., or whether it is more efficient and economical to use the machines up to 18 pt. and hand-set the larger sizes. Mr. Woodman explained that in his composing room the type is set up to 30 pt., by machine but added that he could get three lines of this size type out of the case while he was getting one line out of the machine, unless there was a large amount to be set at one time. In this view Mr. Phillips concurred.

Mr. Deputy told of a survey made with respect to the ratio of type sizes in display advertising in papers published by his firm.

He stated that half of the display lines were over 24 pt., 15% is 30 pt., about 10% is 48 pt. type, and one out of every 100 lines is 72 pt. type. He supplemented his remarks by stating that in his plant type larger than 24 pt. is not set on the machines. He feels that there is no economy in using the machine on large type except in extreme cases where there is a heavy run of copy.

Mr. Baker stated that in his composing room all of the display type above 24 pt. is set by hand although two display machines are available. Mr. Deputy arose to say that whenever there is a sufficient amount of type to be set to

(*Continued on Page 20*)

S. N. P. A. (Western Div.) MECHANICAL CONFERENCE EXECUTIVE COMMITTEE

Chairman—Bert Conner, Fressroom Foreman, Fort Smith (Ark.) *Times-Record*.

Vice Chairman—Composing Room Superintendent J. M. Lighett, Beaumont (Tex.) *Enterprise* and *Journal*.

Secretary—C. W. Tabb, S. N. P. A. Dallas Office.

A. T. Blease, Mechanical Superintendent, Corpus Christi (Tex.) *Caller-Times*.

O. M. Harper, Mechanical Superintendent, Tulsa (Okla.) *World*.

R. J. Crawford, Stereotype Foreman, Shreveport (La.) *Times*.

F. J. Williamson, Stereotype Foreman, San Antonio (Tex.) *Express* and *News*.

New Members Elected for 1943 Term:

L. W. Culver, Photo-engraving Foreman, Ft. Worth (Tex.) *Star-Telegram*.

C. C. Washburn, Pressroom Foreman, Galveston (Tex.) *News* and *Tribune*.

W. F. Thompson, Mechanical Superintendent, Austin (Tex.) *American* and *Statesman*.

Executive Groups Taken at the Fort Worth, Western Division S.N.P.A. Mechanical Conference

1 — Viewing Imperial Type Metal and Zinc Exhibit (Left to right) — Wm. J. Phillips, Mechanical Superintendent, Oklahoma City (Okla.) Oklahoman *and* Times; *T. D. Sedberry, Pressroom Foreman, Waco (Tex.)* News-Tribune; *Henry T. Honig, Universal Mono-Tabular Company; Bert O. Conner, Pressroom Foreman, Ft. Smith (Ark.)* Southwest American & Times-Record. *Mr. Conner is now chairman of the mechanical committee.*

2 — Left to right: Superintendent E. A. Turner, Little Rock (Ark.) Democrat; *Robert Crawford, Superintendent, Shreveport (La.)* Times; *J. H. Gibson, Photo-Engraving Superintendent, Houston (Tex.)* Chronicle; *Mechanical Superintendent Gus Lundberg, Ft. Worth (Tex.)* Star-Telegram; *C. Frank Mann, Composing Room Superintendent, Louisville (Ky.)* Courier-Journal & Times.

3 — Left to right: Noel Ellis, Pressroom Foreman, Harlingen (Tex.) Valley Morning Star; *A. G. Caffer, G. H. Morrill Company; C. H. Tabb, Secretary, S.N.P.A. Western Division; Earl Hardway, Makeup Foreman, Tulsa (Okla.)* World; *H. J. Dowell, Composing Room Machinist, Tulsa (Okla.)* World.

4 — Viewing United American Metal Furnace (Left to right) — L. F. Byus, Representative, Mergenthaler Linotype Company; J. M. Sedberry, Composing Room Machinist, Beaumont (Tex.) Enterprise; *Joseph Bedell, Superintendent, Dallas (Tex.)* News-Journal; *Carl Edholm, Composing Room Machinist, Ft. Worth (Tex.)* Star-Telegram.

5 — Viewing Hammond Machinery Exhibit (Left to right) — Ernest Dodd, Composing Room Superintendent, Little Rock (Ark.) Gazette; *H. G. Phillips, Superintendent, Austin (Tex.)* Statesman; *L. A. Weiss, Superintendent, Houston (Tex.)* Post; *A. T. Vanderlinde, Representative, Hammond Machinery Builders; Wm. B. Astor, Jr., Superintendent, Memphis* Commercial-Appeal.

6 — Viewing Hamilton Electric Page Storage Cabinet (Left to right) — E. B. Naylor, Composing Room Superintendent, Monroe (La.) World & News-Star; *E. C. Arnold, Pressroom Superintendent, Monroe (La.)* World & News-Star; *Jack Pearson, J. M. Huber Company; H. K. Maxwell, Composing Room Superintendent, Dallas (Tex.)* News; *A. L. Ladd, Mechanical Superintendent, Houston (Tex.)* Post; C. H. *Leonard, Business Manager, Gainesville (Tex.)* Register; *H. Frank Dyer, American Type Founders.*

keep a machine busy, it certainly is economical to use the machine.

Is Fluorescent the Answer to Proper Composing Room Lighting? This was the next question brought up by Chairman Bramlett. He stated that as the use of fluorescent lighting increases the new type of fixtures will cost less as quantity production is achieved. Mr. Baker discussed the installation of 24 units of the new type light to replace 57 fixtures in his composing room. He said the new lights are hung 9 ft. from the floor and feels that the units should pay for themselves in 5 years.

Jack Harper of the Harper Printing Company, Dallas, Texas, and George Martin of the *Louisville Courier-Journal & Times* both told about the use of the bay type lights in their plants.

Machinists' Section

In the machinists' section of the composing room session a number of mechanical executives and machinists participated.

Among them who talked were: L. T. Deputy, mechanical superintendent, Dallas *News;* C. L. Baker, composing room superintendent, New Orleans *Times-Picayune;* W. J. Dowell, Machinist of the Tulsa (Okla.) *World;* C. Frank Mann, Louisville, Ky.; J. H. Gibson, photo-engraving foreman, *Houston Chronicle;* R. H. West, Pine Bluff (Ark.) *Graphic;* E. R. Turner, Machinist, Wichita Falls (Tex.) *Record-News* and *Times;* Charles Morris, Mechanical Superintendent Fort Worth (Tex.) *Press;* J. M. Sedbury, Machinist, Beaumont (Tex.) *Enterprise and Journal;* John L. Davis, Manager, Mergenthaler Linotype Company, New Orleans; F. C. Talcott, pressroom foreman, San Antonio *Express & News;* Carl Eckholm, Machinist, Fort Worth *Star-Telegram;* and Joe Mellina, composing room foreman, Galveston *News & Tribune.*

Discussion of various topics was led by R. J. Dunkerley, machinist of the Corpus Christi (Texas) *Caller-Times.* Mr. Deputy opened the discussion on the economic value of machine shops by explaining that the Dallas *News* has buffers, grinders, and lathes, but no welding equipment. In his opinion these machines are valuable in printing equipment maintenance. Chairman Dunkerley feels that machine rooms equipped with proper equipment and material are really essential but sometimes it is hard to sell the idea to the publisher.

Mr. Baker stated that he thinks a small machine shop in the composing room is necessary in addition to the regular and larger shop for the entire plant. Mr. Baker also stated that the *Times-Picayune* rebuilds its own composing machinery. C. Frank Mann feels there are many advantages in having proper machine tools in the composing room while Conference Chairman J. H. Gibson added it is a matter of the size of the plant as to the amount and investment in such equipment because small plants cannot use the equipment.

With respect to the sticking of slugs in 24 and 30 pt. molds, Mr. Dowell remarked that the interior surfaces of molds become leaded and recommended that this coating be removed at regular intervals. Commenting on the suggestion that the mold recess angles be increased, he said, "It may be that the cutting of these recesses will help but the main thing is to keep the molds clean."

Someone asked about the attention which should be given to the back trimming knife on line composing machines. Messrs. Eckholm and Turner agreed that the back knife is one of the most essential and yet one of the most abused parts of the equipment used in the composing room. Mr. Eckholm recommended the use of graphite mixed with a little gasoline instead of using oil for saturating the felts in the mold wipers. Mr. Eckholm goes over the mold wipers once a week. Mr. Sedberry said he uses a steel brush to roughen the wiper felts before applying the lubricant.

During the discussion of the topic *What is the Best Plan for Cleaning Metal for Line Casting Machines?* Mr. Turner said he thinks the most essential point is to clean the metal properly, to stir it while molten, and to keep the temperature at the correct degree. "Do not allow it to get too hot or too cold because it will separate," he said. "Oil is no good to use in cleaning metal for line-casting machines. If you burn it off with oil you burn off a certain amount of tin."

Mr. Bramlett inquired as to the cause of 2 pt. leads sticking together on the Elrod strip-casting machine and wanted to know if the sticking was caused by excessive oil. Mr. Dunkerley thinks that the use of too much oil is the cause of the leads sticking together.

Stereotype Dept.

At the stereotype session L. A. Weiss, stereotype foreman of the Houston (Tex.) *Post* presided. Participating in the discussions were: John Haglund, stereotype foreman, Galveston (Tex.) *News & Tribune;* W. B. Astor, Stereotype Superintendent, Memphis (Tenn.) *Commercial Appeal;* E. P. Gaughan, pressroom superintendent, Tulsa (Okla.) *Tribune;* and George Fuller, Stereotype Superintendent, Cleveland (O.) *Press.*

The first question introduced by Chairman Weiss was *What is the Best Molding Combination?* Mr. Haglund stated he uses a steel board and has had very good success with it. Mr. Astor declared that the steel board is best but when selecting molding combination everything depends upon the equipment. Some plants have light equipment and may not be able to employ the steel board. Mr. Gaughan stated that all stereotype executives must find out their own best molding combination because of the peculiarities of the particular mats, and type of machines in use. Stereotype Superintendent George Fuller of the Cleveland (O.) *Press* stated each type of mat requires a different molding combination.

With respect to the question *What Methods are Used to Mark Color Plates to get Good Registration?* Stereotype Foreman Frank Dye, of the Fort Worth (Tex.) *Star Telegram,* declared he uses a mat cut lengthwise in marking and stated that you do not have to watch the width. He suggested the use of a square or straight edge.

Mr. Fuller discussed the standardized registration mark adopted by the A. N. P. A. and said that if the plate is level and solid, registration is simplified considerably.

With respect to the cooling of plates, Mr. Fuller stated better fitting plates can be gotten if they are sent to the pressroom while warm. Cool water in the plate making equipment causes a lot of distortion but a lot of it comes from shrinking mats. He advised the use of warmer water with more volume and less pressure to get the best results. A number of stereotype executives arose to their feet when Chairman Weiss asked *How Many Thousandths of an Inch Low Can Portions of the Surface of Stereotype Plate be and Still be a Good Printing Plate Regardless of the Type of Blankets on the Press?*

Among those who participated in the discussion were: Fuller; Gaughan; F. C. Talcott, Pressroom Superintendent, San Antonio (Tex.) *Express-News;* E. V. Drozda, pressroom foreman, Houston (Tex.) *Chronicle;* Roy Durie, Waco (Tex.) *Times-Herald;* J. C. Pollock, pressroom foreman, Beaumont (Tex.) *Enterprise & Journal;* Fred Hudson, Pressman's Home (Tenn.); Clem Sagebiell, Stereotype Foreman, Temple (Tex.) *Telegram;* Bert Conner, Ft. Smith (Ark.) *Times-Record;* R. A. Torrons, pressroom foreman, Shreveport (La.) *Times;* Walter C. Johnson, secretary-manager, S. N. P. A., Chattanooga, Tenn.; and E. A. Turner, Stereotype Foreman, Little Rock (Ark.) *Democrat.*

Mr. Talcott said that stereotype plates are known to vary and that he considers a variation of 0.003 in. to 0.005 in. a creditable plate. He uses a semi-hard blanket to make up for the differences in plate surfaces. "Plates do not set entirely until they are cool," he added.

Mr. Fuller stated that more perfect stereotype plates are possible if stereotypers will try to do a better job than they are now doing.

Mr. Pollock declared that practically all stereotype plates vary from 0.002 in. to 0.003 in. but that the nearer a stereotyper can come to a perfect plate the better off everyone will be.

Fred Hudson, engineering department, Pressman's Home (Tenn.) asked, "What is going to be the answer? I think that with the vacuum back you can probably get better print. I do not think there is anything stereotypers can do to eliminate variations up to 0.003 in. or 0.004 in."

Pressroom

C. C. Washburn of the Galveston (Tex.) *News-Tribune,* presided. Among

(*Continued on Page 44*)

PERFUMED INK PRINTING

By EDDIE GAUGHAN*

*Pressroom Foreman, Tulsa (Okla.) *Tribune*. Abstract of address given before S.N.P.A. Mechanical Conference, Ft. Worth, Tex., February, 1941.

IF YOU assume that a well balanced black and white newspaper advertisement will draw 69% attention from readers, the adding of one color to the advertisement will increase it to 84%. When perfume is added to that color, it will add an additional 15%, making the perfumed advertisement about 99% — as nearly perfect from the standpoint of attention value as can be obtained. In this way we have combined the sense of smell with the sense of sight. There is another good point to this form of advertising. It is this: *You can't put this perfume scent out over a bunch of radio waves.* When you have attention, you create interest; interest creates desire and desire brings action. Therefore, a sale is made.

Now, in regard to information about printing a perfumed advertisement. First (as in our case), the advertiser will supply the perfume which in turn is supplied him by the manufacturer. The amount of perfume can be determined by estimating the amount of color ink needed for the particular advertisement for your individual press run.

The manufacturer supplies the perfume which is incorporated with essential oil. The oil is a vehicle necessary to mix the perfume with the ink. It is not straight perfume, it consists of essential oils mixed with the essence of perfume.

The important thing about printing with perfumed ink is how to use it and the amount of perfume to add to the colored ink. The press is made ready the same as for any color advertisement run. When the color plates have been put on the press, have the pressman put a little ink in the fountain of the color he is going to run. By hand, ratchet the fountain and set the flow of ink as accurately as possible. We used 4 oz. of perfume to each pound of colored ink. In other words, for our 63,000 run we use 12 lbs. of colored ink and 48 oz. of perfume, or 3 lbs., which is the same as 3 pints. We found that 4 oz. of perfume to each pound of colored ink struck a happy medium, but a pressman has to use his own judgment and his own nose in determining the proportions of perfume and ink.

Right here, let me make a point clear, because it is important. On the original art, enough solid surface for the perfumed ink should be allowed. Halftone dots tend to lessen the scent, as the surface is broken up too much. The perfumed surface should be carried solid.

Don't mix the ink and perfume in the same container, because by the time it can be gotten into the press it will lose its strength. Wait until the starter is ready. I suggest mixing 5 lbs. of ink and 20 oz. of perfume, which is 1¼ lbs. of perfume. Then you can add the rest for each separate run as you go along. Weigh the ink accurately. Weigh the container first, then weigh the right amount of ink that you are going to start with. A glass measuring cup can be bought in the dime store with the ounces marked on it for use in measuring the perfume. Have the pressman put the ink into the fountain first, then add the perfume and with the ink knife mix it thoroughly, then start the press.

I don't mind telling you, your plant will smell of perfume for a week, and I want to suggest that each pressman tell his wife the story the day before.

The lesson I got from our perfumed ink experience is this. Publishing a newspaper is a business, not a "game", as it is so often misnamed. It is a serious, many-sided business; it is a scientific business of news gathering, reporting and interpreting; a business of selling and transmitting sales messages and then of manufacturing and distributing a finished product. All of this must be done on a schedule as precise as a railroad timetable.

With respect to increased business for the papers with which we are associated, I have always felt that the ideas we can create, or the cooperative execution of other department heads' ideas, will make business for the paper. The road is smoother for the mechanical executive who works with other department heads — particularly the advertising department. This is best explained by my own phrase: "The business has to come in the front door before we mechanics can put it out the back door."

New Linotype Faces

New Linotype faces announced by C. H. Griffith, Linotype vice-president in charge of typographic development, are 24-point Bodoni Bold Condensed with 18-point Bodoni Bold. and 30-point

Modern Man Does
Modern Man Does
Modern Ma
Modern Man

Memphis Bold Italic, and 30-point Metromedium No. 2 Italic.

With the completion of these 30 points, both Memphis Bold Italic and Metromedium No. 2 Italic are now available for keyboard Linotypes in all sizes from 6 to 30 point. Up to and including 24 point, each of these italics may be had in combination with its companion face — Memphis Bold, or Metromedium No. 2.

Mr. Mechanical Executive—Consult the 1941 P-Double-E Equipment and Supplies Catalog to find if and where it's made.

IPI Essay Contest

Two boys from Texas carried off top honors in the Fifth Annual IPI Essay Contest, sponsored in cooperation with the National Graphic Arts Education Association, it was announced this month by Fred J. Hartman, chairman of the Contest Advisory Committee.

More than 6000 high school printing students from all parts of the country wrote essays for the contest on the subject, *Printing, the Safeguard of Democracy.*

First place winner and recipient of a $300 college scholarship is Arnold Weatherford, a senior at Technical High School, Dallas. Tom Land, a senior at the Masonic Home and School, Fort Worth, was awarded second place. His prize is a trip to New York. Jean McLean, ninth grader at the Lincoln Junior High School, Santa Monica, Cal., is the winner of third prize, fifty dollars in cash.

Judges for the Contest, who selected the national winners, were Chairman Harry L. Gage, Vice President of the Mergenthaler Linotype Co., A. E. Giegengack, Public Printer of the United States; President Frank McCaffrey of the International Association of Printing House Craftsmen, Inc.; Walter B. Reilly, President of the UTA; and G. Lynn Sumner, President of the Advertising Club of New York.

Processed in Film Form

The development of a method of processing Koroseal—the synthetic thermoplastic material—into a transparent and highly durable film with wide industrial application has been announced by the B. F. Goodrich Co.

Said Dr. H. E. Fritz, sales manager of the Goodrich synthetics division, "Koroseal film is resistant to outside exposure—sun, oxygen, and extremes and changes of temperature. In addition, the new film is extremely water and moisture-resistant, our tests have shown."

Glass-clear and highly flexible, the film is now being produced in gauges ranging from 0.001 in. and up. It is made in a variety of colors in transparent, semi-transparent, translucent and opaque forms.

While the chief uses of the film are in waterproofing and packaging materials, its chemical inertness, flame resistance, and electrical properties make it useful for laminating chemical containers for holding acids and corrosives and for insulating fine electric wire and cable, Dr. Fritz said.

P-Double-E Where-To-Buy Equipment and Supplies Catalog is useful.

STEEL INTERLAYS *used in conjunction with cored iron base for newspaper zinc cuts, electro and stereo shell cast mounting provide substantial support in stereo molding operation*

By NORMAN G. STELTZ*

*Mechanical Superintendent, Olean (N. Y.) *Times-Herald.*

SINCE much national advertising now comes to newspapers in the form of electrotypes, instead of mats, and because many newspapers have installed engraving plants, the mounting of these electrotypes and engravings has become a preplexing problem in many composing rooms and has been the cause of "headaches" among pressmen and stereotypers.

Of course, we know we can regulate the height or thickness of our stereotype shell casts as well as our engravings. The electrotypes also *could* be made one height. In fact, about 90% of them come one height now. We can never expect them to be made a standard height until newspapers show backbone enough by refusing to accept plates not of a standard height — after that height has been definitely decided upon.

Many newspaper publishers and managers do not know that it is costing them many dollars each day to mount these cuts — not in material — but in time consumed by high-priced employes. At the average salary of 1½c to 2c a minute paid the men who mount the cuts, and figuring that time over a yearly period, you can easily see that many hundreds of dollars are thrown away on a very unsatisfactory job.

The writer does not believe he knows more about articles he purchases from a manufacturer than the manufacturer knows about his own products. Take an automobile, for instance. The manufacturer of the automobile knows what is best and he does not expect you to "improve" it by adding a lot of gadgets.

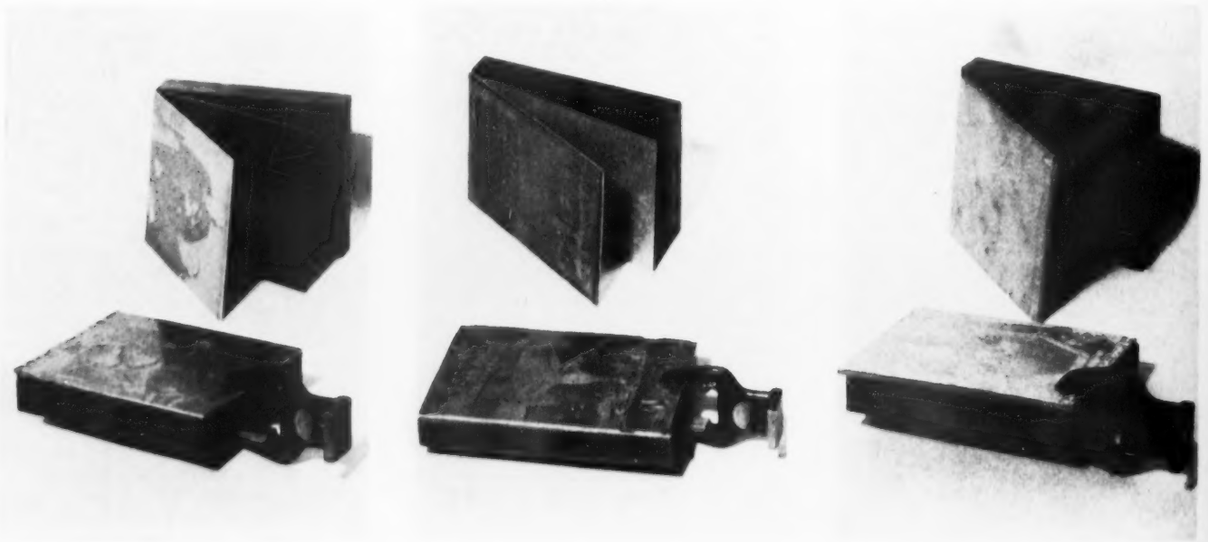
So it is with the height of newspaper form elements, especially type and cuts. After years of experience, the type founders all decided that 0.918 in. was the proper height. And that still is correct. There are pressmen, however, who think cuts should be higher.

We know how cuts are mounted in many newspaper plants by using leads, slugs, cardboard, paper and what not. This is a time-consuming method. If such cuts are moved from one page to another the mounting work frequently must be done a second time. Then again, three different height bases are cast from metal in many plants. These varying-height bases are unsatisfactory because the sizes get mixed in the composing room or stereotype department. Another advantage of the iron base-iron interlay method is that the mounting height of the cuts is not affected after repeated molding operations in a mat roller.

Several years ago we solved this problem through the use of steel interlays. We never gave a thought to passing it along because of the expense involved, but we believe the "first cost" of anything is a good investment if it makes money in the coming years.

The manufacturers of iron newspaper bases make two standard sizes of bases. The other sizes, I believe, cost more because they are classed as special. However, from experience in selling iron base, I know that by far the 0.759 in. size is preferred.

We use 0.759 in. cored iron base which is made in one, two and three-column widths and in 3, 4, 5, 6, 8, 10, 12, 18, 24, 30 and 36-pica lengths. You can get wider and longer pieces from stock, but we believe the above sizes are all that are needed, because they are flexible. You can make anything from a ½ in. single-column ad to a whole page out of these sizes. If you had money tied up in the larger sizes they would not be used once a month. Frequently, in the use of iron base you come to an odd size, like



STEEL INTERLAYS AND CORED IRON BASE USED IN PLANT OF OLEAN (N.Y.) TIMES-HERALD TO MOUNT ZINC CUTS AND 0.105 IN. ELECTROS

Fig. 1 — The snap gauge shows a zinc halftone mounted to 0.918 in. Upper illustration shows the cored iron base which is 0.759 in.; the steel interlay, 0.094 in. thick, and the zinc halftone, 0.065 in. thick, the total of which is 0.918 in.

Fig. 2 — In this illustration, a 0.105 in. electrotype is mounted on the 0.759 in. thick cored iron base, with a 0.054 in. steel interlay between. The resultant measurement of base, interlay and electro is 0.918 in.

Fig. 3 — Shell cast stereotypes (shaved to 0.159 in.) in the plant of the Olean (N.Y.) Times-Herald are mounted directly upon the 0.759 in. cored iron base. By having the one thickness of iron base, Mr. Steltz says the confusion resulting from the use of varying height bases is eliminated.

A new book for Printing Executives as well as for photo-engravers — platemakers — ink manufacturer — chemist — papermaker and others in the allied crafts

PRINTING INKS

Their Chemistry and Technology

By CARLETON ELLIS
Industrial Research Chemist

Important technological changes in the printing processes (familiar to every printing executive) have created exacting new requirements for inks which chemical research has been actively endeavoring to satisfy. In turn, the solving of new production problems brought about by technological improvements, both in equipment and inks, has created the urgent need for a useful book. In preparing this treatise the author has stayed close to the printing plant.

Table of Contents — Introduction: History of Printing Inks; Printing Ink Vehicles; Driers; Printing Ink Modifiers; Pigments; Typographic Inks — Drying-oil Types; Typographic Inks — Mineral-oil and Quick-drying; Planographic Inks; Intaglio Inks; Photomechanical Preparation of Matrices; Transfer Inks; Emulsion Inks; Special Types of Printing Inks; Printing Inks for Miscellaneous Purposes; Printing Ink Problems; The Testing of Printing Inks; Paper for Printing; Glossary Indexes.

Bound in cloth, 6 in. by 9⅛ in., 560 pages, well illustrated. Price $7.00 per copy, cash with order.

PRINTING EQUIPMENT ENGINEER • 1276 West Third Street • Cleveland, Ohio

18½ picas. This is simple to handle by dropping in a 6 point metal slug. It is true that in most cases this metal slug will be 0.003 in. higher than the base — but right here is where the pressure of the mat roller will push down the slug to the same height as the iron base.

To provide the stock from which to cut the interlays, we had made specially to our order, cold rolled sheet steel in 0.054 in. and 0.094 in. gauges. Then we had a first class machine shop cut it up into the needed widths and sizes. As an aside, I'd like to remark that cutting down to printers' "points" is some job for the average machinist.

After the finished interlays had been delivered to us, we were faced with the problem of providing a case in which to keep the interlays for convenient selection.

The case illustrated cost $35 to make. In addition to the lumber and mill work, which was $9, it took just about three days to put it together. This included sawing the grooves for partitions, which had to be cut to "points", adjusting the back stops, painting, etc.

Each group of pieces projects outwardly 1 in. further than the row above so that the top piece in any compartment can be picked out easily.

The first three rows are 12 picas; next three rows are 24½ picas; next three rows are 37 picas and the last three rows are 49½ picas. Each compartment is 1 in. high and between each column width the dividing piece is 1 in. The cabinet is 20 in. high, 13 in. wide and 13 in. deep at the bottom.

We find that with this system our stereotyper can mount all cuts (sometimes 1000 sq. in.) in about 10 min. which formerly took him hours every day. An additional advantage is that our cuts are now mounted "on iron" so to speak, from top to bottom.

These interlays are made in one, two, three and four-column widths and in 3, 3½, 4, 4½, 5, 5½, 6, 8, 10, 12, 18, 24, 30 and 36-pica lengths in each width — that means 56 sizes in all. You will notice that the interlays cover the half-em sizes while the iron base is made on the em sizes only — the half em is taken up by dropping in a slug either to lengthen or to take up the space of a column rule. Of course, our column widths are 12 ems with 6 point column rule. However, the interlays can be made to conform to any column width.

This illustration shows the wooden case made to hold the selection of steel interlays devised by Mechanical Superintendent N. G. Steltz of the Olean (N. Y.) Times-Herald. *The interlay pieces (in 0.094 in. and 0.054 in. thicknesses) are used for mounting zinc cuts and 0.105 in. electros on 0.759 in. cored iron base. Shell cast stereotypes (0.159 in. thick) are mounted directly upon the cored iron base without interlays.*

The cabinet is divided into four sections of three shelves each. The compartments on the first shelf in each section *contain five pieces each of the following widths: 3, 3½, 4, 4½, 5, 5½, 6, 8 and 10 picas: The compartments on the second shelf in each section contain the 12, 18 and 30 pica wide sizes; the compartments on the third shelf in each section contain five pieces each 24 and 36 picas wide sizes.*

The pieces on the three shelves in the top section are 12 picas in depth; the pieces on the three shelves in the second section are 24½ picas deep; the pieces on the three shelves in the third section are 36 picas deep, and the pieces on the three shelves in the lower (or fourth) section are 49½ picas long.

Each row of interlays extends outwardly 1 in. further than the row above. This arrangement makes it easy to grasp any top piece in the cabinet without "digging around" with the fingers for it.

Any electrotype or halftone base area from ½ in. single column to a page area can be covered with these interlays. For economy's sake, it will be necessary to piece them, but that is very simple. For instance, if you have an electro that is 4 col. wide and 20 in. long, you would pick up three 36-pica (6 in.) interlay pieces and a 12-pica (2 in.) piece, all 49½ in. wide, lay them on top the base and there you are, or you could take four 30-pica pieces (5 in. each).

If you have a 6 col. ad you simply take 4 column and 2 column pieces and place them on the base or you can take two 3 column pieces or three 2 column pieces.

If an electrotype should measure 6 points over the 20 in. (taken from the above size), you simply take the sizes as explained above *excepting* the 12-pica piece — then you would take a 4½ and an 8 to make 12½, etc. There is no size that cannot be made in length or in the column widths.

In most newspaper plants the number of column inches covered by electrotypes is far greater than that covered by halftones. By that I mean the interlays for electrotypes are more valuable than for halftones. But we would not be without either of them.

Iron base and steel interlays are indestructible. The first cost is the last cost.

One of the illustrations (left) shows the 0.759 in. iron base with our own shell cast stereotype plate shaved to 0.159 in. This equals 0.918 in. Another illustration (center) shows an electrotype with the 0.759 in. iron base, a 0.054 in. thick interlay, and a 0.105 in. electrotype, the total thickness equaling 0.918 in. The third illustration (right) shows the 0.759 in. base, 0.094 in. interlay and a 0.065 in. halftone, the total thickness equaling 0.918 in.

If your pressman insists on electros or halftones being more than type high, paper interlays can be placed on top of the interlay pieces.

Officers Elected

At the annual meeting of Canadian Linotype, Ltd., in Toronto, the following officers were re-elected: Joseph T. Mackey, president; Harry L. Gage, vice president; Harry E. Reid, vice president; George A. Schwaninger, treasurer, and Thomas J. Mercer, secretary. Edward A. Reynolds was elected vice president.

Making Synthetic Rubber Printing Press Rollers

By J. C. DUNN*

*Sales Manager, Vulcan Proofing Company, Brooklyn, New York.

THE operations employed in the manufacture of synthetic rubber rollers for commercial, magazine and newspaper printing presses will be of interest to readers of *Printing Equipment Engineer*. The use of rollers on printing presses irrespective of the kind, is an important matter to the production or mechanical executive. In this little article besides indicating the main manufacturing operations, an attempt is being made to show that the making of synthetic rollers is a meticulously controlled process. Perhaps the best way to describe synthetic rubber roller manufacture to those who have not actually seen them made is largely by illustrations and simple wording to avoid complicated explanations.

To explain the operations in the most simple manner, we will follow one roller through the factory from the time it is received until it is ready to be shipped to you covered with synthetic material and ready to be put into the press.

When printing press rollers have been received from you at our factory they are sent to the stripping and cleaning department where all of the old covering is removed in a lathe or is cut off by hand with a knife. In the case of rubber or synthetic rollers which are to be recovered, the remaining material adhering to the stock after the stripping operation is burned off with an acetylene torch.

The roller stock is now ready for the final step in the cleaning operation.

Shown in Fig. 1 is the sand-blasting operation. This operation is performed in a small room. The roller stock is placed in a metal-covered box where it rests on two cross pieces which permit rotating the stock as the blasting operation proceeds. Here the operator, protected by helmet and gloves, directs sand or steel pellets under high air pressure to scour thoroughly the metal roller stock to provide a clean metallic surface. This operation is essential to make possible a perfect bond between the clean metallic surface and the new synthetic material which is to be applied. The roller stock is now ready for covering with the new compound.

Before describing the actual covering of the now cleaned and polished roller stock with the new synthetic rubber compound, we will describe the operations in preparing the compound for application to the roller stock.

In Fig. 2, the operator is shown kneading the basic synthetic material on a two-roll rubber kneading mill. In this kneading process, the synthetic material clings to one of the two rolls. Various ingredients are added to the basic synthetic material in the mill in order to produce the desired qualities in the finished roller. Since synthetic rollers are made for letterpress and offset-lith duty in the printing plant and because the purposes for which the rollers will be used require different qualities, the roller covering materials are compounded according to the purpose for which they are to be used in the printing plant. Therefore, it should be obvious to you that no rubber roller is manufactured which is made 100% of pure synthetic material, and it is required that all of this type of material must have certain ingredients added to it before curing to make it suitable for roll covering. However, no rubber is mixed in the compound. After the stock has been thoroughly admixed in the mill it is set aside overnight and on the following day is calendered into a continuous sheet of the proper thickness.

Fig. 3. As was explained in the caption for Fig. 2, after the dough for synthetic rubber roller covering has been mixed, it is set aside overnight. The following day it is passed through this calendering machine and rolled into a continuous sheet of the desired thickness. Calendering is the operation which converts the synthetic mass into sheet form. As the calendering mill rolls the dough, it is deposited on a liner. The liner is a fabric usually treated to prevent the synthetic material from adhering to itself as it is rolled into sheet form and rolled up by the calendering machine. The rolls are now delivered to the building department.

In this Fig. 4, the operator is shown building up a roller stock with the sheeted synthetic material which has been delivered to him from the calendering machine in Fig. 3. The roll on the bench has been wound from the sheeted synthetic material on the roll mounted on the support at the right of this picture. The operator winds the roller stock to an oversized diameter as specified by the customer. It is essential in this operation that the synthetic rubber material be thoroughly rolled with a small hand roller in order to eliminate any trapped air between the layers or wrappings. The ends of the roller are now trimmed of excess stock and the roller is sent to the wrapping lathe.

Fig. 5 illustrates how the operator binds the roller with tape in a lathe with numerous spirally wound wrappings until the entire roller surface is covered. After wrapping, the roller is delivered to the vulcanizing department.

In this Fig. 6 is shown the roller vulcanizer which is, in effect, a large steam-heated autoclave. Here the roller is cured so the layers or wrappings of synthetic material will become a single mass, just as though the roller had been molded from liquid material and later solidified. The roller to be cured is placed with others on a carriage which is rolled into this vulcanizer and cured for definite periods of time at temperatures ranging from 280 deg. F. to 320 deg. F. After the curing operation is completed, the rollers are allowed to cool thoroughly.

Fig. 7. Here the roller as received from the vulcanizer is first stripped of the tape with which it was wound as shown in Fig. 5. This scene may be more or less familiar to production and mechanical executives because they are familiar with rubber roller grinding and polishing operations. The excess compound is buffed off and the roller is brought to exact diameter on this polishing lathe.

The rollers shown in this Fig. 8 have just been received from the grinding and polishing department. Here the completed rollers are subjected to tests to determine if they have the required softness and resilience for the purpose for which they were ordered and to see if they meet our own specifications. The tester in the picture is testing the roller for hardness and resilience by means of a Shore durometer. After he is satisfied, the roller is sent to the shipping department. Sample rollers are made with each batch of customers' rollers and then subjected to complete physical and chemical tests.

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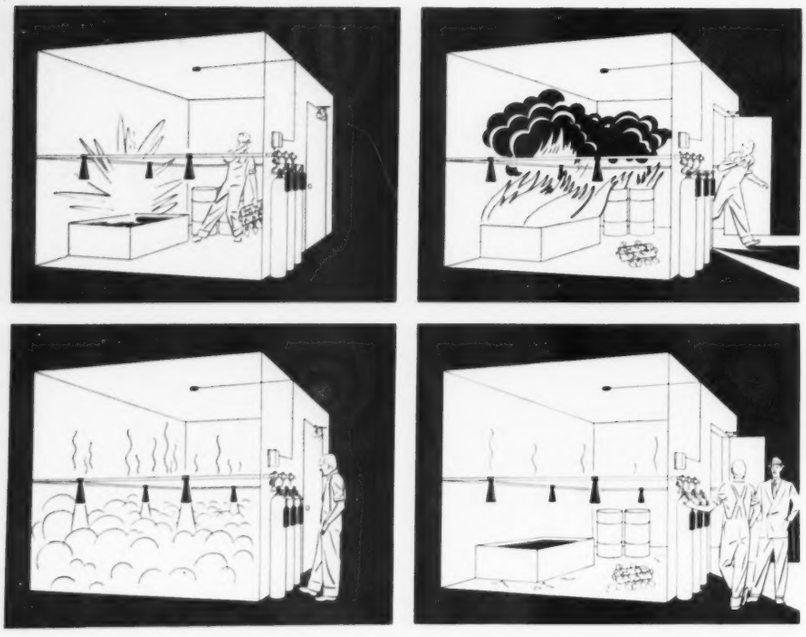


Fig. 2—How a "total-flooding" carbon dioxide system extinguishes a fire in a storage or process room is shown in these drawings. Discharge of the gas reduces the normal 21% oxygen content of the air to 14%-15%, at which point the flammable liquids cannot burn.

FIRE PROTECTION *with carbon dioxide gas extinguishing systems and portable units finding new uses in printing plants*

By P. W. EBERHARDT*

*Walter Kidde & Company, Inc.

CARBON dioxide or "dry-ice" gas, which was first used as a fire extinguishing agent on merchant ships to control cargo fires, now is being widely employed against fire hazards in the printing industry, especially in the newspaper and magazine field. Many of the newer applications for this extinguishing gas are of the "fixed" or "built-in" type, which are installed in the manner of water sprinkler systems, to protect against concentrated hazards where water is either ineffective or dangerous.

First uses of this gas method of fire fighting in printing plants were in the form of *portable* carbon dioxide units, located at strategic points in pressrooms and other hazardous areas. These portables, which consist of steel cylinders holding the gas under high pressure, are equipped with quick discharge valves and nozzles, and can be carried like any other extinguisher to the seat of a blaze, to discharge clouds of the gas over burning surfaces. The gas functions by diluting the oxygen content of the air to a point where fire cannot burn, and in a printing plant its ability to surround obstructions such as presented by a printing press is extremely valuable. The gas, being heavier than air and expanding 450 times its original volume as it leaves the nozzles, quickly penetrates crevices wherever fire may be burning. Used on electrical fires, it eliminates the danger of grounding a live line through the body of the fire-fighter because the gas is a non-conductor of electricity, and because of its dryness it does not damage windings.

Such use of portable carbon dioxide units has been given new impetus recently by the development of heat-set inks, and many plants have installed large and medium-sized extinguishers on presses equipped with ink vaporizing heaters. In one plant where such protection was adopted after considerable testing, it was stated that fires were quickly extinguished by a small discharge of the gas before any damage was done to the rollers or the press itself. Another important advantage of carbon dioxide on press fires is its complete dryness, for the gas dissipates almost immediately and leaves no mess or sticky residue to contaminate ink fountains or require extensive clean-up.

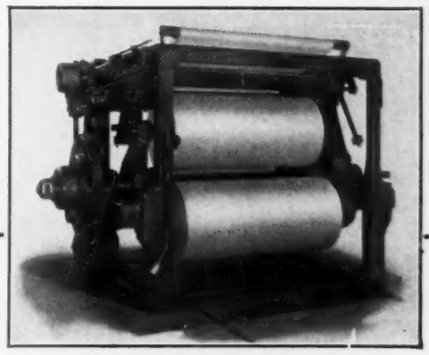
Newspaper Plant Uses

In the newspaper field these portable units are also located at hazard points through the plant, but the largest uses for carbon dioxide are in the form of fixed systems to protect concentrated and stationary hazards. A recent example of such an installation is found in the Manhattan plant of the New York *Daily News*, where a serious hazard existed in the induced draft ventilation ducts which run from the pressroom on the third floor to exhaust vents on the roof of the eight-story building. This duct, which carries off fumes, paper lint, and oily by-products of newspaper printing, naturally becomes coated throughout with a combustible residue. A fire in this duct can, and once did, cause considerable damage

Fig. 1—Close up of one of the fire extinguishing systems discharge horns in a ventilation duct in the New York Daily News *plant. Note the gummy ink deposits which form on the interior of the duct which, when ignited, burn with extreme swiftness and heat plus considerable smoke.*

—Illustrations Courtesy Walter Kidde and Co.

How to obtain more and faster Press Production



Wood Autopaster and Autoreel combined in a single mechanism. The Autopaster can be attached to any other make of reel

ONE WAY to get more and faster press production is to buy more presses. Another way — less costly — is to buy Wood Full-Speed Autopasters.

Autopasters increase press production from 15 to 60 per cent. They shorten press runs . . . make it possible to start presses later and finish earlier.

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WOOD *Full-Speed Autopaster*

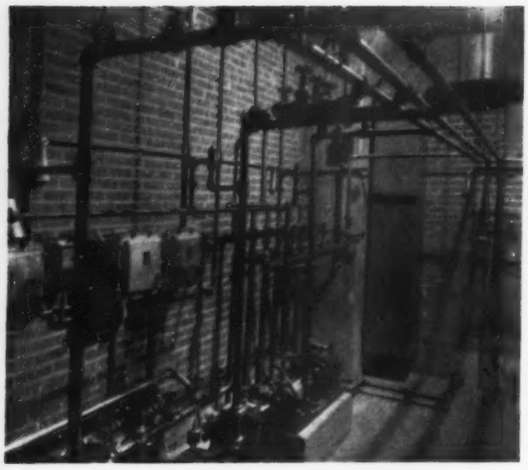

Fig. 3—Pump room of the Daily News *Brooklyn plant where equipment for handling and recovery of ink thinners is located. Because of the volatile fumes and liquids hazard, the entire room is automatically flooded with carbon dioxide in case of fire. Note discharge nozzles on wall.*

to the duct and fans, and the necessity of pouring water in from the top might result in damage to the pressroom equipment.

To extinguish such fires, a ton of compressed carbon dioxide gas now stands guard ready to be discharged into the entire duct the minute fire breaks out. The gas is bottled up in 40 steel cylinders in a penthouse at the top of the duct, and it is manifolded to a piping system which discharges a high concentration of the inert gas through the entire length of the duct as soon as fire is discovered. Control of this system is manual rather than automatic, but the system can be discharged from any one of several points in the building, and operation of any of the break-glass control boxes also shuts off the motors and fans in the penthouse, stopping the up-draft immediately. The location of the piping and the discharge nozzles is such that the entire duct is quickly and evenly flooded with sufficient gas to extinguish any fire burning in the oily residue which coats the interior of the duct.

Pump Room Hazards

In the Brooklyn plant of this same newspaper there is a similar carbon dioxide system to protect another type of hazard. In the pump room where ink thinners are recovered, a serious hazard exists in the volatile fumes and the possibility of electrical or static sparks from the pumps or motors. Fire in such an enclosure can burn with much heat and smoke and the intricate pumping equipment can badly hamper liquid extinguishing streams. For this reason a system has been installed to flood completely the entire pump room with carbon dioxide gas. Discharge of the gas is fully automatic because of the danger of fire breaking out while the room is closed and unattended, and detection is accomplished by "rate-of-temperature-rise" actuators located on the ceiling of the pump room. These actuators consist of air-filled containers and small-bore copper tubing, in which air is compressed by any sudden temperature increase. The air compression actuates a release mechanism which in turn opens the valves of the carbon dioxide cylinders. The gas rushes through the pipes to the discharge nozzles, billows into the room and smothers the flames.

In another printing plant specializing in magazine work, fixed carbon dioxide systems are used to combat press fires. Here again automatic operation is used to eliminate the possibility of human error or panic which often attends the use of portable extinguishers, and also to insure adequate discharge of gas at exactly the right point. The hazard is ignition — from static or other causes — of the ink fountains, rollers, or the web itself, and discharge nozzles are so located as to lay a dense blanket of the gas only on the burning surface. This type of installation which does not flood the entire room is known as "local application" and requires a smaller amount of gas. Tests in this plant, and actual fires which have occurred since its installation, have shown the extreme speed with which the gas discharge extinguishes the fire before any damage is done. The ink fountains are not contaminated in any way and production is resumed immediately.

In this same plant, another carbon dioxide installation has been provided to protect the ink storage room from fire, although the room is of fire-proof construction. A serious hazard existed in volatile thinners, lacquers, and inks, and also because the stacking of many cans and drums made other fire-fighting methods impracticable since fire could burn between the drums and in other hard-to-get-at places. Automatic discharge was provided in a manner similar to that used in the *Daily News* plant, and 24-hour-a-day protection is thus assured.

In such "total flooding" installations, where door and window openings might permit the escape of the carbon dioxide, automatic door- and window-trips are provided in the carbon dioxide piping. These trips, which retract pins when the gas rushes through, release chains on doors and windows, which automatically close — thus retaining the gas discharge until the fire is out. This type of installation eliminates entirely the need for entering a room where fire is burning, and thus prevents injuries to personnel.

Lee Streamlined Copy-Fitting

THE mechanics of type-fitting has been getting considerable attention from those who have any amount of copy writing or layout work to do. One of the latest systems for choosing type for a layout before or after the copy is written, or to fit copy into arbitrary areas, has been developed by Arthur B. Lee, an experienced copy writer and production man, of 137 W. 83rd St., New York.

Mr. Lee's system has been named "Streamlined Copy-Fitting." It consists of a white plastine chart approximately 5 in. by 9 in. containing 28 slotted scales, each calibrated in units of character count, to conform to the 28 keyed groups in an indexed chart booklet which contains a list of approximately 500 type faces ranging in size from 5½ pt. to 18 pt. The booklet also contains computation tables by which it can be determined without calculation the number of characters in lines up to 130 characters line length and from 2 to 25 lines deep. The tables can be used for multiplying characters-wide by lines-deep to get total characters and for dividing estimated lines-deep into a known character count to find the characters-wide of a line.

The following operations may be performed by Streamlined Copy-Fitting System: (1) Counts characters in elite or standard typewritten copy; (2) Measures lines-deep of type from 6 pt. to 18 pt. inclusive; (3) Gives choice of type faces that will fit layout space; (4) Gives character-count of 500 type faces in any point size listed for any line width up to 33 picas; (5) Gives answers to multiplication and division problems; (6) Given any layout space, and before copy is written, the total characters of any selected type face necessary to fit the space can be figured quickly; (7) When copy has been written before layout space is provided, the correct space to allow for the copy can be quickly determined.

All names of type faces listed in the booklet are identified as to manufacturer by suitable symbols.

Further information may be obtained from Mr. Lee at the address given above.

Intertype Waverley

Intertype Corporation announces the cutting of a new face called Waverley. Scotch Roman in origin, it was designed primarily for the book publisher, but its designers claim that it should also appeal to the advertising typographer. Waverley is combined with Italic and small caps and is to be made in a range of sizes from 6 to 36 point. Shown here is the 12 point size.

THIS PARAGRAPH is set in twelve point WAVERLEY, a new Intertype face, and is duplexed with *Italic and* SMALL CAPS. $1234567890

Hammond FLASHES FROM LIFE

EASIER ? SAY ! MAKEUP'S A PLEASURE THESE DAYS. WITH THIS NEW HAMMOND SAW, FORMS GO TOGETHER IN HALF THE OLD TIME. CUTS SLUGS TO EXACT MEASURE IN NOTHIN' FLAT
HAMMOND
Glider
TRIMOSAW

HAMMOND GLIDER TRIMOSAW

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Hammond of Kalamazoo

HAMMOND MACHINERY BUILDERS, INC • KALAMAZOO • MICHIGAN

1604 DOUGLAS AVENUE

EXECUTIVE ¶s

The Public Printer announces appointment of John J. Deviny to the position of Deputy Public Printer in the Government Printing Office effective March 3, 1941. This position was recently vacated by George Ortleb, well-known craftsman who had been serving in that capacity since October 1, 1935, and who submitted his resignation to take effect as of January 8 for the purpose of re-entering private business.

Mr. Deviny was born in Washington, D. C., in the shadow of the Government Printing Office. He served his appren-

ticeship as a printer in the United States Bureau of Engraving and Printing, Treasury Department, and advanced to the office of Assistant Director.

In January 1927, he became Director of Research and Publicity for the Miller Saw-Trimmer Company. Later he was successively Secretary and Executive Vice President of the United Typothetae of America.

On February 3, 1936, Mr. Deviny became one of the first members of the staff of the United States Social Security Board. For the past year he has been serving as a Member of the Appeals Council of the Social Security Board, the highest adjudicative agency of the Board, whose decisions are reviewable only by the United States District Courts.

During his entire career, Mr. Deviny has been actively identified with local, national and international efforts for the economic and industrial improvement of the Graphic Arts and is widely known throughout the United States and Canada as a writer and speaker on subjects associated with the printing industry. He is especially well known for his promotion of the program of the International Association of Printing House Craftsmen, being one of the founders of the Craftsmen movement. He was its first Treasurer and later served two terms as international President. He is a past President and an honorary life member of the Washington Club besides being an honorary member of other clubs.

Mr. Deviny is well known for his activities in the field of business management and is an authority on administrative procedures, both governmental and private.

The Public Printer feels that through Mr. Deviny's experience, particularly that which he gained as secretary and vice president of the United Typothetae of America, he is peculiarly equipped to render valuable service to the Government Printing Office especially at this time in its efforts to coordinate production in the Government Printing Office with procurement from commercial plants towards maximum economy.

He is a member of the national association of American Trade Association Executives and of the National Press Club. He is a member of the bar of the District of Columbia, admitted to practice before the Court of Appeals of the District of Columbia and the Supreme Court of the United States.

—

Martin Tucker is now mechanical superintendent of the Gulf Publishing Co., Houston, Tex. Formerly, he was general superintendent of Maebrick-Clarke Co., in San Antonio, Tex.

—

John Donald, Production Department of King Features Syndicate, New York, has been re-elected for a second term as president of the New York Club of Printing House Craftsmen.

—

LeRoy Church is now mechanical superintendent of the Akron (O.) *Beacon-Journal*. He succeeds Earl Woodward, who recently became mechanical superintendent of the Detroit *Free-Press*.

—

Alexander Clark was appointed superintendent of the Elgin (Ill.) *Courier-News*. He succeeds his father, Herbert Clark, who until the time of his passing had been mechanical superintendent. Ralph Peterson follows Mr. Clark as composing room foreman.

—

Charles J. Hentschell, mechanical superintendent of the St. Paul *Dispatch* and *Pioneer Press*, is now associated with the St. Louis (Mo.) *Post-Dispatch*.

—

The new mechanical superintendent of the St. Paul *Dispatch* and *Pioneer Press* is Eric Ridder.

Will Serve in Chicago Area

N. H. Neilson has been appointed District Sales Representative in the Chicago area for the Dayco Division of

N. H. Neilson will represent Dayco Div. of Dayton Rubber Mfg. Co., in Chicago area.

the Dayton Rubber Manufacturing Company. Mr. Neilson's roller experience extends over a 15 year period.

Appoints Typographer

Howard O. Bullard, Inc., Typographers of 150 Varick Street, New York, has announced that Karel Wolke is now typographical layout and consultant for the company.

Mr. Wolke was formerly associated with Rogers-Kellogg-Stillson, New York Monotype Composition Company and Currier & Hartford.

Saturday Evening Post Gets Its Face Lifted

In a bulletin issued by the Lanston Monotype Machine Company, Art Director Sol Hess describes entertainingly the procedure by which new versions of the Post type faces have been developed and cut exclusively for The Curtis Publishing Company's *Saturday Evening Post*. Approximately a year's work is represented in the completion of the type face lifting job.

One of the new faces, which was made for the *Saturday Evening Post* has been named Postblack Italic; another has been named Post-Stout Italic. The first series was cut in sizes from 7 to 30 pt., and the latter face in 17, 24, 28 and 33 pt. sizes. The number of punches made for both faces numbered well over a thousand.

Mr. Hess also describes further changes in a new type dress adopted for the *Post* and other faces for supplementary editorial display purposes.

Changes Personnel

The Fred'k H. Levey Company, Inc. announces the appointment of Murray A. Beckford, former District Sales Manager of its Philadelphia Division, as Chicago Sales Manager. In Chicago he will assist Special Representative B. J. Kiley. Harry J. Curtis replaces Mr. Beckford in Philadelphia. Gunther H. Schmitz joins the Levey Company as Assistant to Vice President Willard D. Smith, and will also be in charge of the Export Department.

"My No. 2 Kelly is one of the most Profitable Purchases I ever made"

says

RALPH INMAN
President
Finger Lakes Press
Auburn, N. Y.

Profitable ***performance*** **is certainly the greatest compliment any owner can pay his press, and this one backs up his statement with examples of top quality catalog and direct mail work produced on a No. 2 Kelly One example is a recent 32-page book containing four-color process subjects and 150 line screen halftones produced under pressure to meet a deadline. Although there were many forms to handle, the easy makeready, quick-set feeder and accessibility of the No. 2 Kelly combined to speed up getaway and save valuable time. With over a quarter of a million impressions to run, the steady high speed production of the No. 2 Kelly enabled him to meet the bindery date comfortably. Equally important was the ample ink coverage of the No. 2 Kelly which not only contributed much to the quality of the job, but won him an award for "outstanding skill in production." • Many other Kellys are giving consistent performances in leading plants throughout the country today. See them at your nearest ATF Branch Office...or ask your ATF Salesman for full details.** ***Visit Your Nearest ATF Branch Today!***

ATF

AMERICAN TYPE FOUNDERS

200 ELMORA AVENUE, ELIZABETH, NEW JERSEY • BRANCHES AND DEALERS IN 23 PRINCIPAL CITIES

Type Used: Spartan, Lydian Bold and Lydian Cursive

Printing Surfaces for offset-lith

printing in relation to defense needs — Situation may mean development of new plate material

By ADAM HENRI REISER

CONSIDERABLE interest is being exhibited in the far-reaching effects of the defense program. Already there is news of a shortage of aluminum for airplane production. Unless plastics or some other substitute proves applicable, much or even all of the aluminum produced may be earmarked for defense needs. Such procedure would leave its mark on offset-lith, for aluminum is used for press-plate purposes on rotary and offset presses.

To partially protect themselves against such an eventuality, forward-looking employers have contracted for a year's supply. Care must be taken not to overload with more than needed, however. Otherwise a parallel situation may be reached to that of the couple who dined out. After both had been eating for about two hours, the wife asked her husband how he was doing. He replied, "I can still chew but I can't swallow."

Aluminum and zinc are the two most commonly used metals in offset-lith work. Stainless steel is receiving recognition because of its favorable trait of resisting wear; repelling grease in non-work areas, and the ability to receive deep-etched images. Some processes use a composition paper sheet as a press-plate. Another variation consists of metal foil laminated to a thin manila sheet. Small presses use plates that would never work effectively on large equipment. Very thin plates are made for use in small equipment. Stretching a similar plate across a 48 in. cylinder would distort it, and cause faulty register troubles.

Much thought has been given to the advisability of using some form of plastic material as an image base but to this time apparently nothing has come of it. Faced with an exigent situation, it is not at all unlikely that an entirely unheard of —to this time—development in press-plate substances will leave its mark on the industry.

To thoroughly appreciate what this really means, it is necessary to understand press-plate requirements and the demands put upon plates under high speed production. Any substance, to qualify for press-plate purposes under existing conditions, must possess elasticity to enable bending back and forth as well as to permit taut stretching when fastened in the press. The substance must accept a grain without any too great trouble or cost. It should be of sufficient hardness to enable graining about a dozen times, and have that grain so firm as to withstand pounding of inkers, dampers and rubber blanket over the length of the run of the average job. The substance must react economically with chemicals without losing any of its favorable qualities. And the substance must be reasonably priced and obtainable in sufficient quantities.

Why Zinc or Aluminum?

Back in 1900 when experiments first began in a big way with metals for lithography, zinc plates were looked upon most favorably. Direct drawings or transfers demand for their best performance a surface that will accept grease readily. Zinc was found to be soft and to soak up to a degree the grease put to its surface. Experiments in those early days indicated that aluminum supplied a surface that worked much sharper than zinc. It was harder to get the metal to receive and retain the grease film. Indeed even to this day aluminum plate-work habitually runs sharp on the offset press (wherein lies its advantage); zinc, on the other hand, shows an inclination to run full.

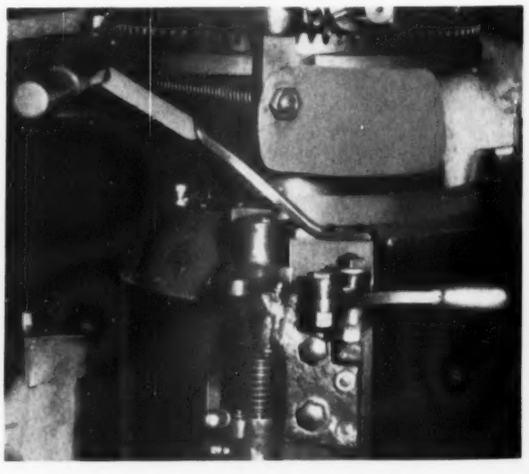
With the introduction of photo-lith methods and the albumin image, came additional substantiation of the findings of the pioneers in metal lithography. Zinc, as stone, furnished a surface which accepted the light-sensitive coating readily. It could be counter-etched readily to receive additions after the albumin image had been established and work easily added. Zinc, again, however, showed that it failed to render the sharp image possible from an aluminum plate. Zinc scummed more readily while running in the press. Aluminum did present a problem in a balanced coating solution in equilibrium with the correct type of grain. But once this is established an experienced mechanic wields the aluminum plate with as much freedom and flexibility in the plate making operation as with zinc.

Zinc came to be known as an easier metal to work, permitting easier plate-making, and therefore found greater favor. With the introduction of deep-etch work, the margin of difference narrowed. Deep-etching operations on both metals are essentially alike, the difference lying in the acid used in deep-etching. But again the action of the metals on the press remains the same as previously. Both metals, zinc and aluminum, fail to present a formidable grain defense. Wear in the press removes the grain in short order, bringing with it running difficulties for the pressman. Much of the effective grease resisting properties of the non-work areas goes with the grain. Harder metals therefore are being wooed.

But priority rulings may be clamped down on the use of zinc, aluminum, and stainless steel for all but defense needs. That leaves plastics, which by their very nature seem to be ruled out. But as the army colonel remarked on discharge day following the world war, "Nothing is impossible; investigate every new development."

Junior Autoplate Safety Stop

NEW ORLEANS (Louisiana) *Times-Picayune's* Stereotype Superintendent Floyd Elrod reports the installation of a safety stop on his paper's Junior Autoplates. The purpose of the stop is to prevent starting the cylinder clutch when the casting box is closed. If the clutch were to be set in motion when the box is closed, the side sticks would be damaged. As shown in the accompanying illustration, the stop is made from $\frac{3}{8}$ in. by 1 in. cold rolled steel, suitably shaped so that its upper end prevents shifting the clutch lever so long as the box is closed. The stop is fastened to the top of the stationary part of the box.



Through an inadvertence, this item about a safety stop for Junior Autoplates was printed without the explanatory illustration. We are reprinting the story with illustration in this issue.

GET THE *"Look It Up"* HABIT

• Every mechanical or production executive who purchases, specifies or is consulted about the purchase of printing equipment and supplies should develop the "look it up" habit.

• What is this "look it up" habit? Nothing more or less than referring to the 1941 "Where To Buy" Printing Equipment and Supplies Catalog. This is the book that answers such questions as — Who makes what — how many firms make it — what is the size — what is the capacity — where can it be obtained?

• This Catalog contains the greatest compilation of facts and figures about all types of printing equipment and supplies that have been published in the last 15 years.

• When you need information about a product in a hurry, look it up in this Catalog. Keep the Catalog handy on your desk. Use it frequently to keep up to date on equipment and supplies.

• If you want manufacturers' literature, prices, etc., fill out and send to us one of the blue postage-paid return cards and we will do the rest.

If it's Printing Equipment and Supplies . . . you'll find it in

THE 1941 PRINTING EQUIPMENT CATALOG

Program Outline for P. N. P. A. Mechanical Conference.

THE Pennsylvania Newspaper Publishers Association Mechanical Conference will be held in Allentown, Pa., on Monday and Tuesday, March 31-April 1. While most of the conference program will be conducted in the auditorium of the Allentown *Morning Call* and *Evening Chronicle* plant auditorium, conference headquarters are at the Americus Hotel.

Monday Morning

Opening Remarks will be made by Mechanical Superintendent George C. Stevens of the Scranton *Times*. Mr. Stevens is chairman of the P. N. P. A. Mechanical Committee. Addresses of Welcome will be made by Publisher Royal W. Weiler of the Allentown *Call-Chronicle*, and Publisher John E. Person of the Williamsport *Sun* and *Gazette-Bulletin*. Mr. Person is president of the Pennsylvania Publishers Association.

At the Stereotype Session on Monday afternoon, Grant F. Wilber of Imperial Type Metal Co. will discuss *Type Metals for Stereotyping*. An address will be delivered by C. A. Babbitt of the Ostrander-Seymour Co., Chicago. C. B. Lartz, Business Manager of the Sharon *Herald*, will report on *Reclaiming of Metal*.

A tour of the *Call-Chronicle* plant for delegates will be conducted by Mechanical Superintendent Harry W. Sherman.

A Pressroom meeting will be held in the ball room of the Americus Hotel on Monday evening at 7:30 o'clock. S. D. Evans of the Lebanon *News-Times*, will preside.

Tuesday's Meetings

In the *Call-Chronicle's* conference room on Tuesday Morning, Robert R. Eyerly of the Bloomsburg *Morning Press* will preside at the Photography and Engraving Session, starting at 9 o'clock.

Photo - Engraving Superintendent Maurice A. Hagan of the Philadelphia *Inquirer* will discuss *Photo-engraving Methods in General Use*. A representative from the Eastman Kodak Co. will talk on an as yet unnamed subject. At this session, Lamont Hartman will present a report, *Photo Copy for Newspapers*.

At the luncheon meeting Tuesday noon, Wm. K. Ulerich of *Centre Daily Times*, State College, will preside and introduce Douglas C. McMurtrie, Director of Typography of the Ludlow Typograph Co. The subject of Mr. McMurtrie's address will be *Newspaper Typography Effective to Meet Modern Needs*.

Joseph B. Breslin, Mechanical Superintendent of the Bethlehem *Globe-Times*, will preside at the Tuesday afternoon meeting. The first speaker to be announced is Amos G. Hoffman of Intertype Corporation, subject not announced. *A Fluorescent Lighting Report* will be given by Mechanical Superintendent George T. Wegemer of the St. Marys *Press*. Mr. Ulerich will discuss *Composing Room Arrangement*. *Flow of Copy Through the Composing Room* is the topic of Harry W. Sherman of the Allentown *Call-Chronicle*.

Time has been allotted for discussing topics submitted by various executives of member papers.

BOOKS
RECEIVED

Pressroom Problems and Answers

MANY commercial printing plant executives, aside from pressroom executives and pressmen, will find Fred W. Hoch's new book, *Pressroom Problems and Answers*, a valuable direct technical reference work. The book contains the answers to 334 pressroom problems. The text matter in the book consists of answers to actual pressroom problems which have been answered by Mr. Hoch from time to time. The book is written in the language of the journeyman pressman, so that it is easily understandable by any executive in a printing plant.

Paper and ink manufacturers, electrotypers and photo-engravers should find this book of high utility when pressroom problems arise in which the tendency is to lay the blame on furnished materials used in pressroom production.

For convenient reference a Topical Index of 637 operations, terms and processes is cross-indexed. The 17 Reference Headings include Binding, Copy-fitting, Books on Printing, Comments on Industry Advancement, Die Stamping, Electrotypes, Finishing, Engraving, Ink, Management, Paper, Plates, Presswork, Processes, Rollers, Stereotypes, and so on. In fact, the author has anticipated that the reader would like to have such a wide variety of material indexed for ready reference—otherwise, it would be difficult to locate the answer to a particular problem.

Other books which have been published by Mr. Hoch have had considerable acceptance. These are *Handbook for Pressmen*, *Standard Book on Estimating for Printers*, *Estimating Graphs for Printers*, *Production Standards and Economic Cost Values*.

Pressroom Problems and Answers—By Fred W. Hoch. Published by Fred W. Hoch Associates, Inc. Size 6 in. by 9½ in., 258 pages, bound in blue cloth, gold stamped. May be ordered through *Printing Equipment Engineer*, price $3 per copy, cash with order.

Free Plane Ride

A plane ride to Davenport from any place in the United States is offered by The Linograph Company of Davenport, Iowa. The Sales Promotion Department is offering this free trip to prospective customers. "If the customer purchases

a Model 50 Linograph," states the announcement, "he will be returned home in the new Cub Cruiser. If he does not, he will have to walk home."

In the illustration are E. C. Murray, General Manager, and R. D. Englehart, pilot of the new Linograph plane.

Represents IPI

Robert Sulzer is a new representative for International Printing Ink in Baltimore and Washington. He will act as assistant to M. A. Flynn, manager of IPI's Baltimore branch.

Ink Specimen Book

A new ink specimen book containing samples of 35 Everyday colors, 11 blacks, three whites, and other material is being distributed by the International Printing Ink Division of Interchemical Corporation. Color samples show results of running inks with a 50% and a 10% screen. Characteristics are listed for each of the colors.

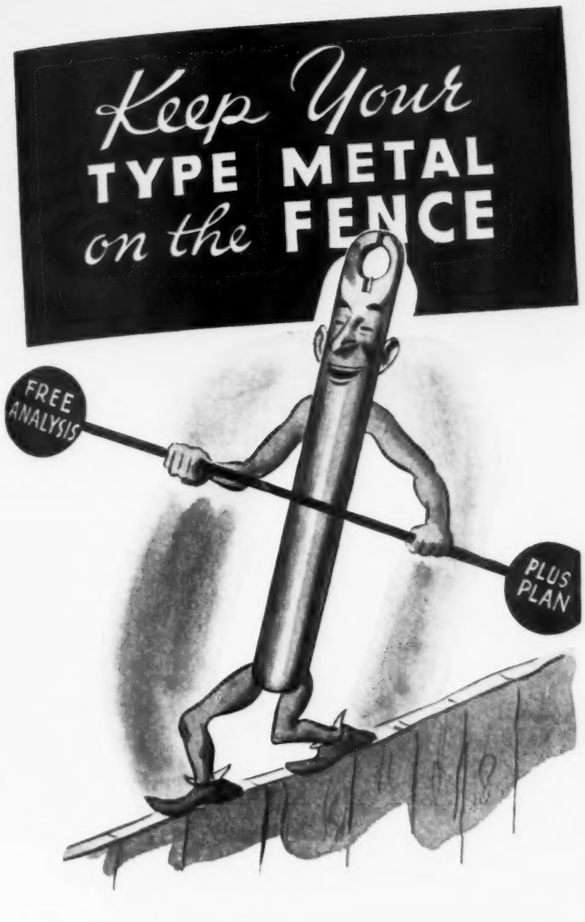
Characteristics of the 11 blacks, with suggestions as to the most suitable applications are given and drying times and other properties are discussed. Copies are available from IPI, 75 Varick Street, New York, N. Y.

Roller Bulletin

Durotype and Ideal Typo Rollers is the title of a bulletin issued by Ideal Roller & Mfg. Co. Described are characteristics, purposes and uses. Also discussed are Ideal Synthox and Ideal Graphic form rollers. Copy sent on request.

Once More There's Profit

Bulletin issued by Miehle Printing Press & Mfg. Co., asserts "Once more there's profit for you in printing for the butcher, the baker and the candlestick maker." Small jobs can be done profitably on the new Miehle V-50 Vertical. Bulletin explains how press is adaptable to the many kinds of small printing jobs.



● To maintain minimum casting temperatures and low dross loss, your type metal supply must stay on the fence, balanced between too much or too little tin and antimony. Proper control such as the Imperial Plus Plan keeps your metal in balance. Then your customers or readers get the advantage of sharp, clean faces and cleaner impressions. Your plant benefits from a minimum of metal trouble and lower yearly metal costs.

Why not join the thousands of Imperial customers who rely on Imperial Metal? Remember—as soon as the first pound of Imperial enters a shop, the Imperial Type Metal Co. assumes the unconditional responsibility for that metal's performance. The Plus Plan makes this possible because it keeps the metal supply in ideal condition at all times. Try Imperial on your next order for improved metal performance!

IMPERIAL TYPE METAL CO.

PHILADELPHIA • NEW YORK • CHICAGO • LOS ANGELES

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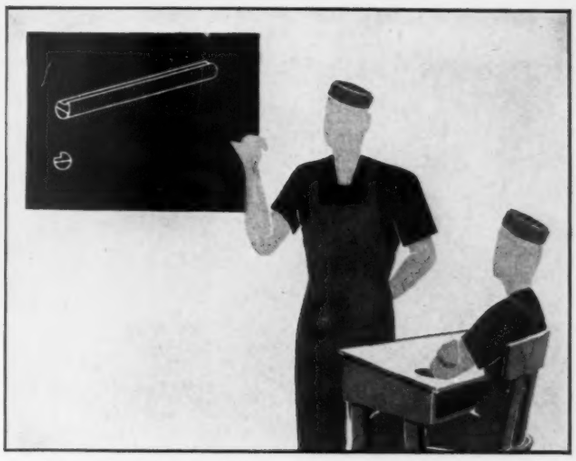


The Kid Inhales Education in *Numbering for Profit*

★ "This is the shaft of a numbering machine."

● "Who gouged a slot in it?"

★ "Your observation certainly has improved. This V-slot carries lubricating oil to every wheel bearing—sort of a one-squirt system. See?"

● "I see, but why do you wanna?"

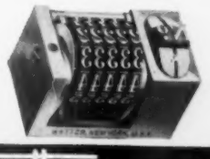
★ "You're skidding again. Wheels turning on a dry shaft mean friction and wear—and maybe not turning. Lubrication helps machines live long and work right."

● "But punk steel lubricated still might be worse than good steel dry."

★ "Right—100%. That's why Wetter shafts are made of drill rod. Nothing better for the job."

● "Sort of sold on them, ain't you?"

★ "Son, you're a master of understatement. *We number better with Wetter.* They last so long we forget the price."



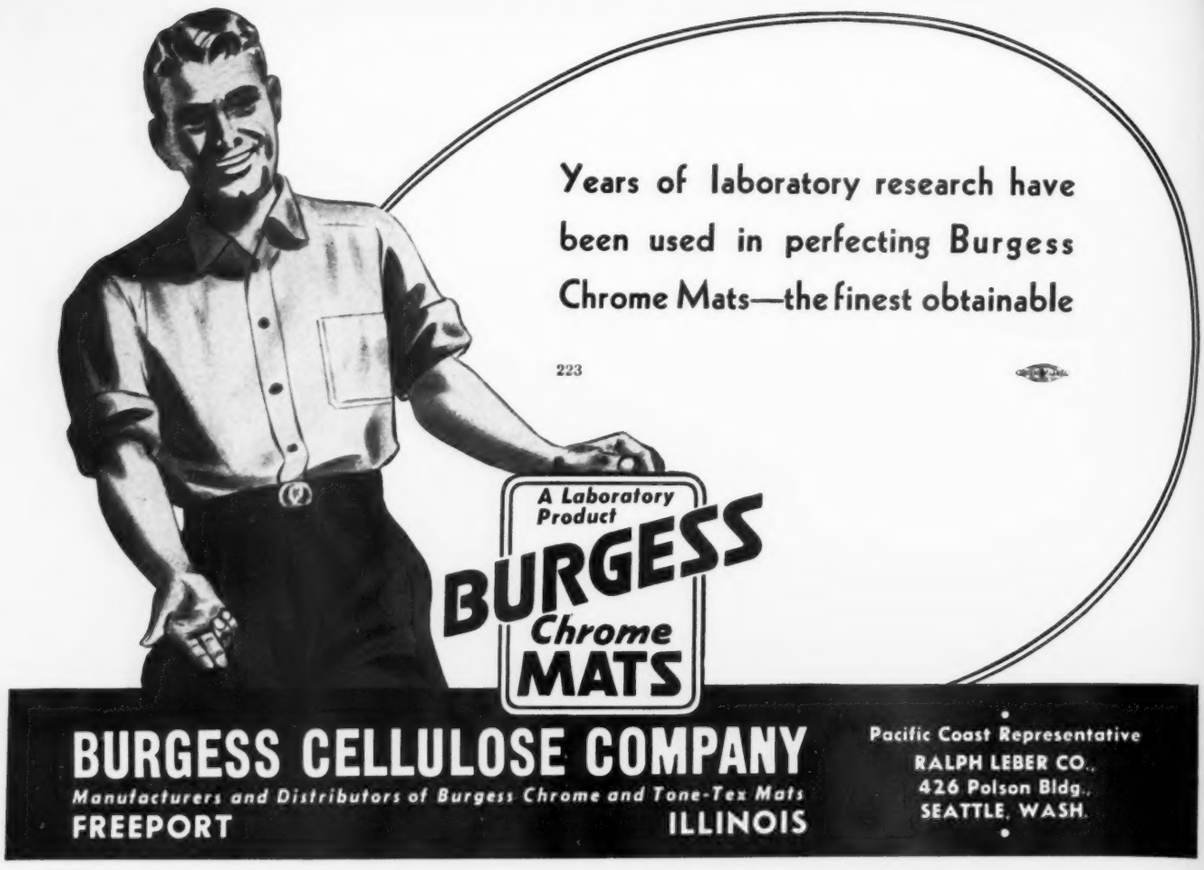
WETTER NUMBERING MACHINE CO.

ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.

Sold by all dealers and branches

AMERICAN TYPE FOUNDERS

136



Proof Smudging Ended

Slip-sheeting and offset eliminated by installation of radiant energy unit in a Cleveland plant

By R. J. O'BRIEN*

*Courtesy *Electrical Production*.

INFRA-RED drying of printed proofs at Bonnar-Vawter Fanform Company, Inc., Cleveland, is saving money and trouble by preventing smudging and offset and by eliminating slip-sheeting.

The Bonnar-Vawter Company prints forms for business machines, used for handling bookkeeping, accounting and other office records. These printed forms must be accurate, since numbers and letters fit into columns which usually are cross-lined.

For this reason, proofs are scanned closely by proof-readers who frequently measure the column cross-lining, as well as check the forms for typographical accuracy. Some proofs are sent to customers who check them repeatedly, often department by department.

Slip-sheeting these proofs caused considerable trouble, as slip-sheets must be cut to the proper size for each size of proof sheet, then placed properly to prevent offset. Even then, when the proof arrives before the proof-reader or the customer the ink still is not dry and will smudge easily.

In an effort to find a solution, a portable infra-red dryer for use in proofing was installed. This dryer, shown in the illustration near a Vandercook proof press, may be moved from one proof press to another and connected easily to the nearest convenience outlet.

The cabinet was built of 20-gage steel, 23 in. sq., mounted on legs of inch angle iron which bring the top of the cabinet 3 ft. 8 in. above the floor. On the "roof" of the cabinet two 250-w. Westinghouse infra-red reflector lamps were mounted on porcelain cleat receptacles so that the tips of the lamps are only 8 in. above the removable shelf shown in the picture. This distance insures effective heat transfer and drying, without danger of scorching. A 3 in. space is left between the bottom of the cabinet, side walls and the removable shelf so that proofs may be laid readily on the shelf to dry as they come off the press. This also permits free evaporation of solvents in the ink. Except for the shelf, all parts of the dryer are spot-welded together. The cabinet and legs are finished in crinkle finish.

This dryer, which dries the inkiest proof in 45 sec., has been very effective in saving trouble. Customers like the "non-smudge" proofs. This advantage will repay the reasonable cost of the installation in a comparatively short time.

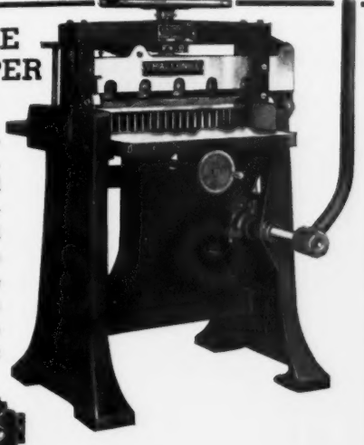
Two 250 w. infra-red reflector lamps dry inkiest proof in 45 sec. in Cleveland plant.

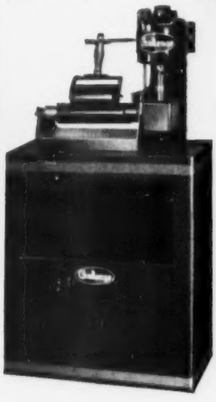
Economize with....

CHALLENGE EQUIPMENT

CHALLENGE LEVER PAPER CUTTERS

Made in two sizes, 26½ and 30½-inch, these powerful lever cutters reduce physical effort and insure economy. The table is supported by a solid center piece —no sag—last sheet cuts every time.





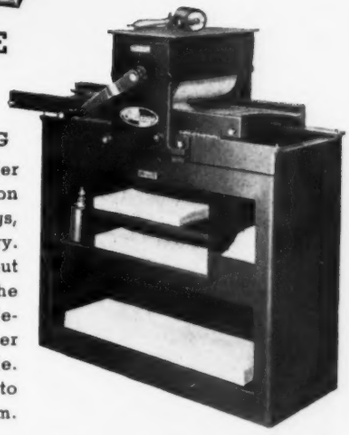
CHALLENGE POWER INK DISTRIBUTOR

Every print shop needs one! Saves time . . . makes it easy to ink hand rollers. You simply set a roller on the revolving metal cylinders, and in a jiffy it's uniformly inked. Unit is motor powered. Made in 10 and 20-inch sizes. Stand optional.

CHALLENGE PROOF PRESSES

SERIES C and CG

Built like a cylinder press—bed rolls on anti-friction bearings, cylinder is stationary. Two styles: C, without grippers; CG, with the Challenge register device with bed gripper and adjustable guide. Sizes from 12x18 to full newspaper form.



CHALLENGE HI-SPEED QUOINS

Two do the work of 5 to 8 ordinary quoins. Operated by one turn of key, self-locking, cannot slip. Made of cadmium plated steel, each one a self-contained unit. Six handy sizes. ● Write for further data on above items.

The Challenge Machinery Co.

Main Office and Factory: 359 GRAND HAVEN, MICH.

Eastern Sales Office: 50 Church St., NEW YORK

WORLD'S FASTEST COMPOSITION KEYBOARD

for large volume straight matter!

TELETYPESETTER

The famous Teletypesetter Keyboard Perforator shown above is the most efficient and fastest keyboard ever designed for large volume straight matter. It works so fast it's no trick at all for an operator, after a relatively short training period, to prepare tape at approximately double manual operating speeds on a line casting machine. Composition really *rolls* out.

When the tape is placed on the Teletypesetter operating-unit attached to a composing machine, the machine plugs right along with practically no delays due to distributor stops, mats jamming, etc. Instead, hour after hour the composing machine continues to fill galleys with slugs in about half the time it would take by hand. That's why Teletypesetter gives you more type in less time. Get the details on how it's done.

SEND FOR THIS BOOK

The bulletin contains complete details on the Teletypesetter system. It is of particular interest to mechanical and production executives. We know you will want a copy so send for it today.

TELETYPESETTER CORPORATION

1400 Wrightwood Avenue, Chicago, Ill.

New York Office: 172 Fulton Street, New York, N. Y.

TELETYPESETTER

REG. U. S. PAT. OFFICE

"ENOUGH CAN HAPPEN OUTSIDE THE PLANT

— to make newspaper publishing a headache," says the Mechanical Superintendent. "So I want you boys to make every plant operation sure-fire and trouble-proof. Think up short cuts. Stick to equipment and methods that save time and don't backfire. What we want is *dependable* production . . . And, John, I think you're right about sticking to Certified Mats!"

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION

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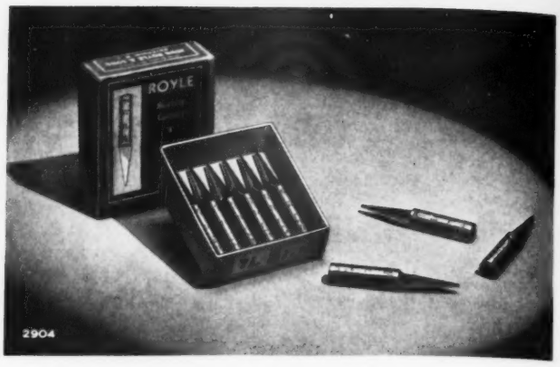
Certified DRY MATS



ROUTING CUTTER HEADQUARTERS

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

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PRINTING PATENTS REPORT

Covering Patents Issued January 28, February 4, February 11, February 18

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine. For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,229,936. BINDER ELEMENT of the double comb type having binder prongs extending from each side of a back member, wherein the prongs or teeth extending from the opposite edges of the back strip are so arranged that each perforation of the leaves to be bound can be engaged by a pair of teeth. Invented by Andre Prache, Paris, France. Unassigned. Application May 17, 1939. 8 claims.

2,230,634. BOOK formed by gathering the leaves either in single sheets or folded signatures and placing binding inserts in cut-out portions along the binding edge, thereafter molding a rigid backbone onto this edge and the inserts so that the inserts are firmly secured to the backbone, the leaves in turn being secured by the inserts. Invented by Robert A. Williams, Chicago, Ill. Unassigned. Application October 27, 1937. 17 claims.

2,232,131. BOOKBINDING METHOD wherein folded end sheets are attached to book bodies having hinge strips with overlapping and free portions by gumming portions along the outer faces of the leaves of a folded end sheet, folding the free portion of the hinge strip and adhering the gummed portions of the leaves to the overlapping and folded free portions respectively of the hinge strip. Invented by Elbridge W. Palmer and Herman L. Beutler, Kingsport, Tenn. Assigned to Kingsport Press, Inc., Kingsport, Tenn. Application October 29, 1940. 12 claims.

2,232,132. BOOKBINDING MACHINE for attaching end sheets to book bodies provided with hinge strips having overlapping and free portions, comprising means for advancing a book body, means for gumming portions along the outer faces of the leaves of a folded end sheet, and means for folding the free portion of the hinge strip and for adhering the gummed portions of the leaves to the overlapping and folded free portions respectively of the hinge strip. Invented by Elbridge W. Palmer and Herman L. Beutler, Kingsport, Tenn. Assigned to Kingsport Press, Inc., Kingsport, Tenn. Application October 29, 1940. 12 claims.

2,232,133. BOOKBINDING MACHINE comprising apparatus for advancing a book body, means for supplying a wide tape and causing the edges of the tape to overlap the opposite sides of the book body, and separate arrangements for securing the overlapped edges of the tape to the book body and then slitting the wide tape into narrow tapes. Invented by Elbridge W. Palmer and Herman L. Beutler, Kingsport, Tenn. Assigned to Kingsport Press, Inc., Kingsport, Tenn. Application November 14, 1940. 21 claims.

2,232,134. BOOKBINDING METHOD comprising advancing successive book bodies, causing the edges of a wide tape to overlap the opposite sides of the book bodies and securing the overlapping edges to the book bodies, and then slitting the wide tape into two narrow tapes and severing these narrow tapes to form hinge strips for the book bodies. Invented by Elbridge W. Palmer and Herman L. Beutler, Kingsport, Tenn. Assigned to Kingsport Press, Inc., Kingsport, Tenn. Application November 14, 1940. 13 claims.

Composing Room Equipment:

2,229,689. APPARATUS FOR PHOTOGRAPHIC COMPOSITION OF TEXT MATTER including an improved method for photographically impressing characters one at a time in justified lines, the lines being in longitudinal series on a line-wide strip. Invented by George Westover, Balcombe, England. Unassigned. Application April 22, 1938. 13 claims.

2,229,690. TYPOGRAPHIC COMPOSING MACHINE adapted to impress by light action upon a sensitized surface of a line-unit bar of preferably translucent or transparent material, a line of justified typographic characters. Invented by George Westover, Balcombe, England. Unassigned. Application June 7, 1938. 19 claims.

2,229,917. TYPE SLUG DESHANKING MACHINE comprising knife means operable to cut into the slug adjacent the connection between its head and shank, stripper mechanism for the head of the slug comprising a member to bear laterally against the head of the slug, means for actuating the knife mechanism, and separate means for operating the stripper. Invented by William M. Cunningham, Chicago, Ill. Assigned to Ludlow Typograph Co., 2032 N. Claybourn Ave., Chicago, Ill. Application October 13, 1939. 14 claims.

2,230,513. METAL FEEDING MECHANISM FOR TYPE FORMING MACHINES equipped with means for automatically controlling the feed of metal to the melting pot in a manner such that the molten metal in the pot may be maintained at a constant desired level. Invented by Henry G. Nichols, North Wilkesboro, N. C. Unassigned. Application March 16, 1939. 1 claim.

2,231,196. MACHINE FOR CLEANING AND LUBRICATING SPACEBANDS used in typesetting machines. The invention functions continuously to clean spacebands stored in the ejector mechanism and, after cleaning, to transfer the spacebands to a receiving and storage means from which they may be removed. Invented by Charles J. Romyns, Lynbrook, N. Y. Unassigned. Application December 18, 1939. 2 claims.

2,231,899. LINE COMPOSING MATRIX for photographic production of type matter, comprising a character bearing plaque and novel means for supporting and securing the plaque. Invented by Herman R. Freund, Brooklyn, N. Y. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application May 20, 1939. 6 claims.

2,231,924. METHOD AND APPARATUS FOR PHOTOGRAPHIC COMPOSITION of lines of type matter from composed lines of character bearing elements varying in thickness according to the setwise width of the characters they bear on a face normal to the element thickness and to the longitudinal axis of the composed lines. Invented by Walter Koller, Kuesnacht, Switzerland. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application May 28, 1937. 32 claims.

2,231,925. MATRIX for photographic production of type, having the characteristics of matrices adapted for circulation in type line composing machines, including special features of configuration facilitating support of the matrix during assembly, and novel means for supporting a type character bearing film in the matrix. Invented by Walter Koller, Kuesnacht, Switzerland. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application May 28, 1937. 11 claims.

(*Continued on Next Page*)

A PAIR OF SMOOTH PERFORMERS

A FAMOUS PAIR of smooth performers are Zomo Electric Zinc and A-Z Alloy. These metals owe their quick, clean etching qualities to the electric induction furnace in which they were melted and cast. Zomo Electric Zinc for all regular work, A-Z Alloy for long direct press runs and heavy mat work, and both now obtainable with the "Machine Cut Finish," as smooth as black ice.

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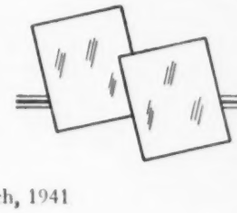

ZOMO ELECTRIC ZINC

A-Z ELECTRIC ALLOY

2,231,972. APPARATUS FOR PHOTOGRAPHIC COMPOSITION OF TYPE, comprising a channel with a fixed and a movable end wall for confining the respective ends of lines, a support for a stationary sensitized surface disposed perpendicular to the length of the channel, means for displacing character bearing elements, from which type is photographically produced, singly and successively from a line and for bringing each displaced element into a different photographing position relative to the sensitized surface corresponding with the respective positions occupied by the elements prior to displacement, and means for photographing the characters on the elements onto the sensitized surface. Invented by Ransom H. Turner, Little Neck, N. Y., and Le Roy W. Willis, Stamford, Conn. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application March 23, 1938. 22 claims.

2,232,432. TYPOGRAPHICAL SLUG CASTING MOLD comprising spaced cap and body elements, the innermost opposed longitudinal surfaces of which are substantially parallel and provide walls defining the minimum vertical height of the casting slot, a plurality of fore and aft fins projecting into the space between the longitudinal surfaces and having a maximum setwise width materially less than the vertical distance therebetween, and the fins having tapered sides extending forwardly from the rear face of the mold to a point of intersection midway of the fore and aft depth of the casting slot, so as to provide in the mass portion of the slug body shrinkage slots beyond the width and extent of which the slug body is at least the full thickness as determined by the vertical height between the walls. Invented by John W. Bittner, Bellrose, N. Y. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application August 28, 1940. 3 claims.

2,232,446. ASSEMBLER FRONT FOR TYPOGRAPHICAL COMPOSING MACHINES comprising an inclined power driven matrix delivery belt, a series of vertical guides for directing matrices onto the belt, these guides being spaced at their lower ends at such a distance above the belt as to guide and confine the matrices flatwise but yet permit their free discharge, and manual adjusting means for altering at will the distance between the guide ends and the delivery belt. Invented by Edmund M. Goodbody, Bellerose, N. Y. Assigned to Intertype Corp., 360 Furman St., Brooklyn, N. Y. Application November 19, 1940. 12 claims.

Feeding, Folding, Delivery:

2,230,089. SLIP SHEET APPARATUS comprising a carrier for receiving slip sheets, forwarding rollers, a pivoted air nozzle, a rod for raising the nozzle, a cam controlling the rod, and a second cam operated rod for pivoting the nozzle toward the forwarding rollers in such a manner that the slip sheets are lifted successively from a stack and advanced to the forwarding rollers by the successive action of the two rods. Invented by Adolph Potdevin, Garden City, N. Y. Assigned to Potdevin Machine Co., 1227 28th St., Brooklyn, N. Y. Application March 9, 1937. 3 claims.

2,230,168. BUCKLING FOLDING MACHINE having a plurality of successively arranged parallel folders, wherein the sheets can be fed to any desired pair of rollers on the inlet side, or taken from any desired roller pair on the outlet side, without the roller system being affected. Invented by Georg Spiess, Leipzig, Germany. Unassigned. Application February 18, 1938. 5 claims.

Re. 21,707. MACHINE FOR SEPARATING AND FEEDING BLANKS characterized by improved means for rendering the power raising mechanism inactive when the top of the pack attains a predetermined level, this improved means being controlled by a vertically movable follower which forms no part of the blank separating means. Invented by William W. Davidson, Evanston, Ill. Unassigned. Application for reissue July 1, 1939. Originally Patent Number 1,963,694. 20 claims.

2,230,633. SHEET FEEDER with pile elevating mechanism and control means so constructed that compressed air may be utilized in the operation of the mechanism and control of the pile elevator. Invented by Leo C. Williams, Pearl River, N. Y. Assigned to Dexter Folder Co., Pearl River, N. Y. Application December 19, 1936. 24 claims.

2,231,179. SHEET STACKING MACHINE providing means for holding the sheets under pressure by adjustable spring arms, with an arrangement for automatically raising the arms at the same time the "gate" of the stacker is raised to permit the stacked sheets to pass from the machine. Invented by Henry G. Bleistein, Indianapolis, Ind. Unassigned. Application May 28, 1940. 7 claims.

2,231,339. SHEET FEEDING MECHANISM claimed to have no tendency to feed double, comprising a stack support, suction-type grippers for lifting the sheets, and a novel mechanism for moving an intermediate gripper to band each sheet, as it is lifted, outwardly on both sides of the normal sheet plane. Invented by Frank Krueger, Brooklyn, N. Y. Assigned to E. W. Bliss Co., 53rd & Crane Sts., Brooklyn, N. Y. Application March 28, 1939. 15 claims.

2,232,152. FOLDING MACHINE comprising inner and outer knife-type folding mechanisms, conveyors for bringing sheet sections to each folding mechanism, heading up or registering devices adapted to move sheets on certain of the conveyors inwardly and sheet sections on the other conveyors outwardly into proper folding positions, and means for operating the heading up or registering devices, each operating mechanism comprising a single cam. Invented by Lesley R. Tufts, Hillsdale, N. J., and Walter Holms, Pearl River, N. Y. Assigned to Dexter Folder Co., Pearl River, N. Y. Application June 2, 1939. 66 claims.

Miscellaneous:

2,230,655. METHOD FOR PRINTING NEWSPAPERS with special inserts of definite dimensions comprising printing on a continuous web a repeated design in which the design is composed of a plurality of design elements and in which the dimension of the design parallel to the longitudinal dimension of the web is substantially equal to one dimension of the finished insert minus the similar dimension of any single design element it is desired to show in full on all of the inserts; cutting the continuous web transversely into separate sheets indiscriminately as to the design with the distance between cuts being substantially equal to the one dimension, and finally assembling the separate sheets into newspapers as inserts. Invented by Georges Sauerwein, Paris, France. Unassigned. Application April 4, 1938. 3 claims.

2,230,876. METHOD FOR COATING PRINTED PAPER WEBS for protecting the web and improving its appearance and strength, comprising coating first with vinyl acetate resin and then with cellulose acetate. Invented by M. Earl Wysong, New York, N. Y. Assigned to Fred Goat Co., Inc., 318 Dean St., Brooklyn, N. Y. Application July 14, 1937. 6 claims.

2,231,171. METHOD OF EMBOSSING comprising passing a continuous sheet of paper, etc., from a source of supply to a wind-up station under insufficient tension to remove wrinkles therefrom at an embossing nip, passing the sheet through embossing rolls, and increasing tension sufficiently to eliminate wrinkles in a zone extending on either side of the embossing rolls. Invented by Leonard E. Randecker, Erie, Pa. Assigned to Hammermill Paper Co., Erie, Pa. Application September 22, 1938. 12 claims.

Plate Making:

2,229,867. ARTIST'S WORKING LAYOUT PAPER with which it is unnecessary to employ a halftone or "Ben Day" film screen when making a photographic negative of the layout, comprising a paper sheet having one surface provided with reticulated lines sufficiently closely spaced to give a halftone shading effect. Invented by Joseph F. Murphy, West Roxbury, Mass. Unassigned. Application December 27, 1939. 4 claims.

2,230,156. LITHOGRAPHIC ETCHING SOLUTION comprising one volume of aqueous hydrochloric acid and 3-6 volumes of a water-miscible glycol containing more carbon atoms than hydroxyl groups, such as propylene glycol. Invented by Everett F. Carman, Rutherford, N. J. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application March 6, 1940. 2 claims.

2,230,776. PRINTING PLATES and printing units composed of interpolymerization products of styrene with a nitrile such as acrylic or methacrylic nitrile, in place of conventional type metal. Invented by Claus Heuck, Sehkopau, Germany, and Adolf Freytag, Ludwigshafen/R., Germany. Assigned to I. G. Farbenindustrie A.-G., Frankfort/M., Germany. Application May 13, 1939. 3 claims.

2,230,784. PRINTING PLATES and printing units composed of a polymerization product of methacrylic acid methyl ester, or an interpolymerization product thereof with styrene, in place of conventional type metal. Invented by Walter Reppe and Adolf Freytag, Ludwigshafen/R., Germany. Assigned to I. G. Farbenindustrie A.-G., Frankfort/M., Germany. Application May 13, 1939. 4 claims.

2,230,981. PLANOGRAPHIC PRINTING PLATE characterized by having water receptive areas of polyvinyl alcohol or polyvinyl alcohol and a filler such as clay. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, Brookline, Mass. Application July 23, 1940. 26 claims.

2,230,982. PLANOGRAPHIC PRINTING PLATE produced by coating a hydrophilic resin on a suitable base and selectively locating grease-receptive areas on the hydrophilic resin by photographic exposure. Invented by William C. Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, Brookline, Mass. Application November 25, 1939. 7 claims.

2,231,045. LITHOGRAPHIC PROCESS wherein the lithographic plate is conditioned by applying a solution containing ½–2 oz. of a 10% solution of a water-soluble chromium phosphate and a 1–4 oz. proportion of a 14° Bé. gum arabic solution per gallon of water. Invented by William H. Wood, Bedford, Ohio. Assigned to Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio.

Printing Presses and Equipment:

2,229,683. APPARATUS FOR MAINTAINING REGISTER IN MULTI-UNIT PRESSES consisting of a mechanical governing mechanism actuated by variations in the tensions of the reaches of the web between the printing units to make gradual slight changes in the relative speeds of web-moving members so as to restore the tension on each reach of the web to its original value. Invented by Max Stoessel, Ridgewood, N. J. Assigned to Arthur Dultgen, Queens Village, N. Y. Application December 29, 1938. 11 claims.

2,230,395. UTILIZATION OF RELIEF PRINTING PRESSES FOR INTAGLIO PRINTING, employing the combination in a rotary printing press of an intaglio printing cylinder carried by the press, and inking mechanism for the combination. Invented by Henry A. Wise Wood, deceased. Assigned to Wood Newspaper Machy. Corp., Plainfield, N. J. Application January 24, 1939. 1 claim.

2,230,503. VIBRATION MOTION FOR INKING SYSTEMS with novel means to eliminate shock, employing hydraulic members in reversing the end motion of the ink cylinders and for varying the length of the dwell of the ductor roller. Invented by Oscar C. Roesen, Scarsdale, N. Y. Assigned to Wood Newspaper Machy. Corp., Plainfield, N. J. Application January 27, 1939. 2 claims.

2,230,715. CONTROL SYSTEM for controlling the register between a color cylinder of a printing press and a color impression on the web. Light sensitive means are provided which respond to each of the register marks or indicia on a length of moving material to produce an electrical impulse, and additional means for producing another electrical impulse in accordance with the position of the operating element. Invented by William D. Cockrell, Schenectady, N. Y. Assigned to General Electric Co., Schenectady, N. Y. Application March 14, 1940. 8 claims.

2,230,826. BURNER FOR DRYING PRINTING INK adapted to be attached to the usual printing press and to operate in conjunction therewith so that the freshly printed paper as it leaves the press is treated to greatly accelerate the evaporation and oxidation of the solvents contained in the ink. Invented by John B. Burdett, Highland Park, Ill., and William H. Bureau and Thaddeus P. Tesmer, Chicago, Ill. Assigned to Burdette Mfg. Co., Chicago, Ill. Application October 1, 1938. 5 claims.

2,230,870. LAYOUT OR KEY SHEET REGISTERING DEVICE provided with a body having means for clamping the body in position on the bed of a printing machine, the device having a neck sharpened to perforate a layout or sheet brought into contact therewith. Invented by Elmer F. Noell, Cincinnati, Ohio. Assigned to Printing Machy. Co., 436 Commercial Square, Cincinnati, Ohio. Application July 26, 1939. 10 claims.

2,231,187. PRINTING PRESS ATTACHMENT for effecting registration of multi-color printing plates, wherein perforations of the printing plate are utilized for properly positioning the plate both angularly and circumferentially of the printing roll. Invented by John F. Hawley, Riverside, Ill. Application September 30, 1940. 9 claims.

2,231,661. HYDRAULIC BRAKING APPARATUS for unit type printing presses, characterized by use of a hydraulic pump automatically controlled through operation of the press in such a manner that the pump is operated only when application of the brakes is required. Invented by Allan J. Cline, Chicago, Ill. Unassigned. Application November 25, 1938. 15 claims.

(*Continued on Page 42*)

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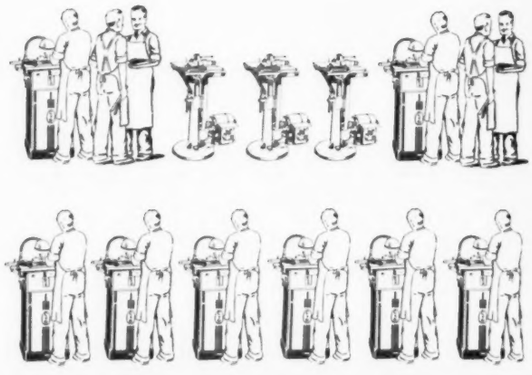

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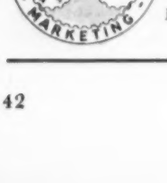
2,231,666. DAMPENING MECHANISM for lithographic presses, designed for more selective control of the volume of moisture applied to the plate. The device employs a plurality of water supplying nozzles with individual adjusting means for each nozzle. Invented by Hyman E. Golber, Chicago, Ill. Assigned to Miehle Printing Press & Mfg. Co., 2021 Hastings St., Chicago, Ill. Application May 11, 1938. 9 claims.

2,231,694. DAMPENING MECHANISM FOR LITHOGRAPHIC PRINTING PRESSES providing means whereby the film of moisture to be applied to the non-printing portions of the plate may be reduced to a minimum and can be positively controlled during the productive period of the press. Invented by Burt D. Stevens, Chicago, Ill. Assigned to Miehle Printing Press & Mfg. Co., 2021 Hastings St., Chicago, Ill. Application May 7, 1938. 1 claim.

2,231,738. PRINTER'S COMPOSITION ROLLER comprising a core, a perforated casing surrounding and spaced from the core, means for fastening the casing to the core, and a cylindrical surface layer of composition overlaying the casing and passing through the perforations, so that the surface is clinched to the casing and firmly attached to the core. Invented by Samuel A. Shoup, Detroit, Mich. Unassigned. Application February 26, 1940. 1 claim.

2,231,914. SHEET REGISTERING MECHANISM FOR PRINTING MACHINES comprising a continuously rotating cylinder to receive sheets and registering mechanism for the sheets received by the cylinder including a sheet holding device carried by the cylinder and consisting of a member acting to hold the front edge of the sheet in front registry and to move axially of the cylinder to adjust the sheet thereon. Invented by William F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co., Inc., E. River & 138th St., New York, N. Y. Application October 2, 1937. 42 claims.



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EQUIPMENT SALES

Recent Linotype Installations

One or more Linotypes, many of them with self-quadders and thermo-blo mold coolers, have been installed by the *Polish Daily News*, Detroit; Lawyers Co-operative Publishing Company, Rochester, N. Y.; National Home Monthly, Winnipeg, Manitoba; Minneapolis (Kan.) *Messenger;* U. S. Novelty Company, Salt Lake City, Utah; William J. Atwill, Buffalo, N. Y.; Fireside Printing and Publishing Company, Detroit; Transylvania Printing Company, Lexington, Ky.; National Carbon Coated Paper Company, Sturgis, Mich.; Hastings (Mich.) *Banner;* Anniston (Ala.) *Star;* Lebon Press, Hartford, Conn.; Western Printing and Lithographing Company, Racine, Wis.; Marinette (Wis.) *Times-Union;* Joseph E. Erwin, Philadelphia; Western Printing Company, Inc., Seattle; Eli Page, Monroe, La.; Hampshire (Ill.) *Register;* Salt Lake City (Utah) *Tribune* and the *Telegram;* Madrid (Iowa) *Register-News;* Electric Printing Company, Cleveland, Ohio; Bayonne (N. J.) *Times;* Nassau *Daily Review-Star*, Rockville Center, N. Y.; Faribault (Minn.) *Daily News;* Huxley Lino Inc., New York City; Asheville (N. C.) *Citizen* and the *Times; Daily Freeman*, Kingston, N. Y.; Marmel Printing Company, Chicago; The Northeastern, Telequah, Okla.; Hastings (Neb.) *Daily Tribune;* Industrial Index, Columbus, Ga.; Girard College, Philadelphia; Command and General Staff Press, Ft. Leavenworth, Kan.; Denver City (Texas) *Press;* U. S. Naval Station, Guantanamo Bay, Cuba.

Three Linotypes have been added by the Wilmington (Del.) *Journal-Every Evening* and the *Morning News*. One or more Linotypes have been installed by the MacLean Publishing Company, Ltd., Toronto; Kenosha (Wis.) *Evening News;* Gunthorp-Warren Printing Company, Chicago; Washington (D. C.) *Post;* Rufus H. Darby Printing Company, Washington, D. C.; *Coachella Valley Submarine*, Coachella, Calif.; *Gallia Times*, Gallipolis, O.; Recording and Statistical Corporation, Danville, Ill.; Standard Typesetting Company, Chicago; Flint (Mich.) *Journal; Northwest News*, Chicago; United Lutheran Publication House, Philadelphia, Pa.; *Arkansas Democrat*, Little Rock, Ark.; Dearborn (Mich.) *Press;* Feuer Typesetting Service, New York; Kankakee (Ill.) *Republican-News;* Las Cruces (N. M.) *Sun-News;* Service Composition, Chicago; Paintsville (Ky.) *Herald;* Las Vegas (Nev.) *Age;* Hattiesburg (Miss.) *American; Sokol Polski*, Pittsburgh; *Nordisk Tidende*, Brooklyn, N. Y.; Wentford W. Thompson, Los Angeles; Burbank (Calif.) *News;* Buckeye Press, Inc., Mansfield, O.; Roessler Brothers, Inc., Cincinnati.

Sta-Hi Installations

Sta-Hi Corporation of Los Angeles reports the following recent sales of one or more Sta-Hi Master Formers: St. Paul (Minn.) *Dispatch & Pioneer Press;* Hollywood (Calif.) *Citizen-News;* Kalamazoo (Mich.) *Gazette;* Milwaukee (Wisc.) *Journal;* Buffalo (N. Y.) *Evening News;* Buffalo (N. Y.) *Courier-Express;* St. Louis (Mo.) *Globe-Democrat;* Passaic (N. J.) *Herald-News;* Pittsburgh (Pa.) *Press;* McKeesport (Pa.) *News;* Flint (Mich.) *Journal;* Los Angeles (Calif.) *Times;* Washington (D. C.) *U. S. Government Printing Office;* Newark (N. J.) *Evening News;* Hartford (Conn.) *Times;* Los Angeles (Calif.) *Downtown Shopping News;* Chicago (Ill.) *Tribune;* Phoenix (Ariz.) *Republic & Gazette;* Syracuse (N. Y.) *Herald-Journal*. New Sta-Hi Autoformers have been installed by Lima (Peru) *El Comercio;* Winston-Salem (N. C.) *Journal-Sentinel;* and Knoxville (Tenn.) *News-Sentinel;* and Rebuilt Autoformers by Passaic (N. J.) *Sunday Eagle;* Marinette (Wis.) *Eagle-Star* and Newark (N. J.) *Universal Color Press*. New Sta-Hi Junior Former installations include Clinton (Ia.) *Herald;* Binghamton (N. Y.) *Press;* Helena (Mont.) *Independent;* Springfield (Mass.) *Daily News*. Sta-Hi Finaltrim Curved Matrix Shears have been installed by Chattanooga (Tenn.) *Times;* St. Louis (Mo.) *Globe-Democrat;* Pittsburgh (Pa.) *Press;* Chattanooga (Tenn.) *News & Free Press*. The Sacramento (Calif.) *Union* and Richmond (Va.) *News-Leader* have ordered Routomatic Curved Plate Routers. The McKeesport (Pa.) *Daily News* has ordered a Premier Rotary Shaver.

Sta-Hi Power Lift Form Files for composing rooms have been installed by Boston (Mass.) *Herald-Traveler;* Peoria (Ill.) *Journal-Transcript;* Chattanooga (Tenn.) *Times;* Baton Rouge (La.) *State Times & Advocate;* Philadelphia (Pa.) *Inquirer;* Richmond (Va.) *News-Leader*.

Wins Safety Certificate

A certificate has been awarded by Associated Industries of New York State, Inc., to the Mergenthaler Linotype Co. for the safety record maintained throughout the Linotype factory. The certificate was accepted for the Linotype Company by C. A. Hanson, vice-president, at a dinner at the Hotel Astor, New York City.

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employing a new method of insulation and construction, reduces the time of remelting by from 30% to 50% below that required by most of the type-metal remelting furnaces now in use. Designed or heating by gas (natural or manufactured), by electricity and by coal with autostoker.

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as fine a type metal as is made
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It's one way to win
But KIMBLES are safer
And save all the din.

Motors by KIMBLE
Distributed by AMERICAN TYPE FOUNDERS
Branches and Sales Agents in 25 Cities

Reid Newspaper Storage Rack

Store 20—8 column pages with stereotype chases

USERS

Register Pub. Co., Denver, Col. . . one Nov. 1938
Register Pub. Co., Denver, Col. . . one Nov. 1939
News-Herald, Denver, Colorado; Star-Journal, Minneapolis, Minnesota; Star Publishing Company, Pueblo, Colorado; Birmingham News, Birmingham, Alabama; A. E. Hemsohn, Denver, Colorado; Times, Seattle, Washington.

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CHICAGO, ILL. ESTABLISHED 1912

WOOD FLONG CORP.
HOOSICK FALLS • NEW YORK

YOUR ? S ANSWERED

Cutting and Padding Technique

(1) What is the best bevel to grind paper-cutting knives for trimming books? Should it be flat or concave, 23 deg. or 26 deg., 1⅜ in. or 1¼ in.?

The paper knife bevel should be ground flat or a shade concave and must not exceed in length twice the thickness of the knife plus ¼ in. or 24 deg. If these dimensions are not adhered to and a longer bevel is ground on the knife, the flat side or face of the knife will become rounded about ½ in. back from the cutting edge, thereby taking the slight concave out of the knife. This will cause the machine to cut tapering, *i.e.*, the top of a cut 4 in. or 5 in. high will be narrower than the bottom of the cut.

(2) What grade of stone should be used in grinding?

Grinding may be done with sandstone, emery or other abrasive wheel. The abrasive wheel should be made by silicate process, about 66/36 grain, medium grade, or soft enough so that a light feed can be taken without burning or glazing the beveled section of the knife. Operator of the grinding machine should be in constant attendance while the knife is being ground and should have a liberal supply of water feeding upon the wheel where it comes into contact with the knife bevel — not at the top of the wheel. If the water supply fails and the wheel continues to grind, friction will be created which will heat up and draw the knife temper. Precaution should be taken to grind the cutting edge parallel with the top of the knife — not having either end or the center of the knife wider than another part, for when this occurs, the cutting edge does not strike the cutting stick squarely and has a tendency to snip out at the wide section. This destroys the cutting stick quickly. If any color shows on either the face or back of the knife when ground, it indicates that the temper has been drawn by overheating. This is caused by lack of water, too heavy wheel-feed, wrong kind of wheel or a glazed wheel.

(3) Please describe the best method of honing a knife?

Every knife, when coming from the grinding machine, has a wire edge which should be honed off before the knife is placed in the knife bar. The knife should be laid on a bench or table, flat side down, with the edge of the knife protruding about ⅛ in. beyond the table edge. The hone should be held flat on the bevel and the motion should be circular as well as up and down. The honing should be done from one end to the other without lifting the hone from the knife. Never hone the flat side of the knife. When a fine wire edge appears on the flat side, lay the hone on lightly without pressure and absolutely flat and draw from one end to the other. After honing 4 or 5 min., the wire edge will disappear or become so fine that a small white pine stick drawn along the cutting edge will eliminate it. Never hone a knife while in the machine.

(4) What kind of wax is best for preventing chipping of brittle stocks such as the pulp magazines?

Paraffin wax is as good as any.

(5) Have you any suggestions for cutting apart thick padded and stitched work when bound two or more up, in such a way as to avoid crushing or breaking the binding edge?

Thick padded and stitched work should be cut in small lifts with an equal number of items turned opposite to make a fairly flat pile. In cutting stitched books, after turning say five books with the binding edge to left and five to the right, the one bunch on top of the other to make a flat pile, trim the bottom first, then turn the pile around to back gauge and trim the top; next, turn all books the same way to trim the side. In splitting padded work, have the padded edge to the right, cutting through the glued edge first.

(6) What is a good test for proper clamp pressure?

Always use minimum clamping pressure that will hold. Test may be made with a pile of scrap stock. The flat steel face to clamp often may be used to advantage.

New
Magnified — Shows air vents which permit escape of steam and which expedite drying. Thru these perforations more glue is exposed to the air and the felt dries quickly and sets permanently.
IT TEARS EASILY at the holes to any length . . . . like postage stamps . . . .
The Old Way
When ordinary felt is heated the moisture on the adhesive generates steam which forces the felt to part at the bond and lift from the mat.
The New Way
Ventilated Felt allows the steam to escape through air vents, thus the adhesive dries quicker and the bond is positive.
VENT-A-FLEX
IT'S SELF-VENTILATING
the greatest improvement in matrix backing since the advent of ready gummed felt
GUMMED PACKING FELT
MORE FLEXIBLE
Make This Test
Wrap a strip of ordinary felt around your finger. It will crack and spring out straight again when released.
Ventilated Felt is pliable as linen, curves easily without cracking and stays in place.
AMERICAN PUBLISHERS SUPPLY
P. O. BOX 131 — WEST LYNN, MASS.

Appointed Manager

George W. Benton is now manager of the Western office of the Lithographers National Association, Inc., 29 South LaSalle Street, Chicago. Mr. Benton has been active in trade association work in Chicago for fifteen years.

SNPA CONFERENCE

(Continued from Page 20)

those taking part in the discussion were: R. A. Torrons, pressroom foreman, Shreveport *Times;* E. V. Drozda, pressroom foreman, Houston *Chronicle;* Harry Shelton, pressroom foreman, Oklahoma City *Oklahoman & Times;* J. C. Pollock, pressroom foreman, Beaumont *Enterprise & Journal;* F. C. Talcott, pressroom

★ *Modernize*

AS WELL AS

★ *Rebuild* YOUR

LINOTYPE *and*
INTERTYPE MACHINES

The most complete results and lowest costs can be attained *ONLY* thru availment of "STAR" Parts and facilities.

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REBUILDING OF UNITS

form a trinity of service that is unequalled in the trade. The "STAR" trademark on a type setting machine part is an assurance of good material — fine finish and accuracy.

Ask for machine rebuilding details

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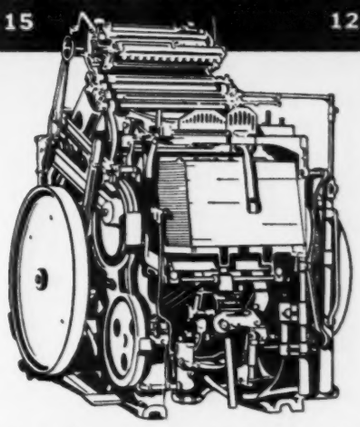
Precision
TRADE ★ MARK
Parts

LINOTYPE PARTS COMPANY

NEW YORK — 203 Lafayette Street
KANSAS CITY — 314 West 10th Street
CHICAGO — 318 West Randolph St.
MINNEAPOLIS — 503 Fourth Ave., South
DENVER — 1441 Blake St.

The Craftsman Automatic Unit

10 x 15 — 12 x 18



● High quality presswork–high production speed–low operating cost. Write for booklet "33 Reasons"; it tells the *real* story of Hand-wheel Impression Control; shows, *by pictures and text,* how this modern feature insures better printing and cuts makeready time and costs.

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MORE PRINTABLE
MORE DURABLE

MORLEY TRUTONE MATS

● for newspaper use:
Cleaner, deeper mold with minimum of pressure. Greater definition and sharper impression. Send for free test samples.

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PRINTING INKS
for **ANY** *purpose,*
USUAL OR UNUSUAL
Our line is complete!
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Weatherproof as an old salt - - *that's why*
CROMWELL TYMPAN
helps you produce
better looking printing at bigger profits

Cromwell Tympan is impervious to excess moisture, sudden changes of temperature or extremes of hot and cold. It will not shrink, swell or turn soggy.

THE CROMWELL PAPER CO.
4801-39 S. WHIPPLE STREET . . . . . CHICAGO, ILL.

foreman, San Antonio *Express & News;* and H. R. Hayen, Ponca City (Okla.) *News*.

The first question proposed by Chairman Washburn was related to a remedy for ghosting. Mr. Torrons explained the belief that the top sheets can be changed to get away from ghosting. He added, however, that ghosting comes and goes and is really true to its name.

Mr. Drozda discussed ghosting and said there are two distinct forms, one is caused by the indention of blankets from previous runs, and the other is due to a roller condition. He stated that ghosting more frequently appears in the print as the result of the plate containing heavy solids and large type. "The finishing roller picks up the impression of the type and before it turns it loose again it prints the ghost impression," he said. He thinks that the only way to overcome ghosting is to go back to the old system of using three form rollers.

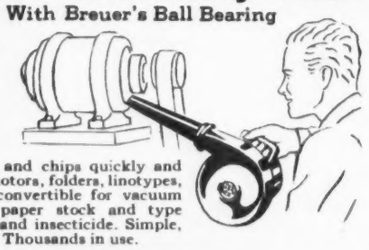
Mr. Talcott proposed that those who have ghost trouble and who are using three-piece blankets should investigate the consistency of the second blanket. He claimed that this trouble has been located more in the middle blanket than on the outside ones. Another suggestion was that form rollers should be of unequal size.

The next topic for discussion was related to the fact that many pressmen find they are getting less coverage from ink and it was asked if the loss is caused by the general use of more illustrations or is it due to the quality of ink or newsprint used?

Messrs. Drozda, Talcott, and Torrons, along with John W. Dobbs, Wichita Falls (Tex.) *Record-News and Times;* E. C. George, pressroom foreman, Houston (Tex.) *Press;* J. W. Kaether, pressroom foreman, Amarillo (Tex.) *Globe News;* and F. S. Beneke, pressroom foreman, Fort Worth *Star-Telegram,* participated in the discussion of this question.

Mr. Drozda said, "We run more pictures and heavier type so it takes more ink. With Southland paper our copy would not get as black so we had to use more ink."

Clean Your Machinery FAST
With Breuer's Ball Bearing
TORNADO
Convertible Electric
BLOWER



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TAKE THE DUST OUT OF DUSTRY
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Write for information and FREE TRIAL OFFER

Recommended—
Eastern Tru-Mold Cork Blankets
For the finest results obtainable in all dry mat molding.
Extra smooth surface and uniform density.
Gauges ¼ in., 5/16 in. and 3/8 in. Each gauge supplied in Hard and Medium.
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PROCESS
Quick, Efficient, Safe, Machine Method of Cleaning Matrices in the Magazines.
Write
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DUPLEX PRESSES
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Handle Benzine Safely • Reduce Waste Hazards

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LINOTYPE - INTERTYPE REPLACEMENT PARTS

Liners	$1.00
Spacebands	.75
Distributor Box Bars	4.50
Second El. Bars	6.40
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Universal Molds	55.00

Large free catalog of other bargains. Free type gauges if you mention this advertisement.

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STEEL RULE DIES
J.A.RICHARDS
write THE SAWMAKER KALAMAZOO

NATIONAL
ROTARY NUMBERING HEADS
for dependable, accurate numbering (right angle & parallel) at highest cylinder speeds
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Helpful hints about handling inks, compounds, driers, etc. Valuable information prepared by experts. Write for it on your firm letterhead. It's FREE!

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Consult the PRINTING EQUIPMENT ENGINEER 1941 Where-To-Buy Catalog of Equipment and Supplies when investigating new equipment.

For Sale **TAYLOR REGISTERING PROJECTOR**
complete and in excellent condition. May be seen in use.
EASTMAN KODAK COMPANY
Kodak Park Works
ROCHESTER, NEW YORK.

NEW **-PRESS GEAR LUBRICANT**
Approved by GOSS
- Lasts twice as long
- Clings at highest speeds
- More protection—less maintenance

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SOVEREIGN OIL CO., 765 Oakwood Blvd., Chicago

Mr. Talcott declared that the use of more pictures in newspapers is one of the greatest causes for less ink coverage.

The opinion was expressed by several executives that Southland paper does not now take more ink than it did at first. Paper made from southern pine prints more nearly like northern paper.

With respect to trouble with leader lines punching through the paper, it developed that some newspapers have practically eliminated the use of leaders throughout the paper. C. Frank Mann, composing room superintendent, of the Louisville *Courier-Journal & Times* said that all of the leaders in his composing room cast to a 0.913 in.

Printing With Perfumed Ink

Pressroom Superintendent Eddy Gaughan of the Tulsa (Okla.) *Tribune* discussed the printing of perfumed ink in newspapers. An abstract of Mr. Gaughan's address appears in connection with the conference report.

Photo-Engraving Dept.

L. W. Culver, photo-engraving foreman of the Fort Worth (Tex.) *Star-Telegram* presided at the photo-engraving session. The first question for discussion was related to the Alltone Process. Among those participating in the discussion were: E. V. Drozda, pressroom foreman, Houston *Chronicle;* F. C. Talcott, pressroom foreman, San Antonio *Express & Times;* L. T. Deputy, mechanical superintendent, Dallas *News;* O. M. Harper, mechanical superintendent, Tulsa *World;* Frank Dye, stereotype foreman, Fort Worth *Star-Telegram;* F. S. Beneke, pressroom foreman, Ft. Worth (Tex.) *Star-Telegram;* Ben Davis, photo-engraving superintendent, San Antonio (Tex.) *Express News;* Eddie Gaughan, pressroom superintendent, Tulsa *Tribune;* R. A. Torrons, pressroom foreman, Shreveport *Times;* E. A. Turner, stereotype foreman, Little Rock (Ark.) *Democrat;* and J. H. Gibson, photo engraving foreman, Houston *Chronicle.*

Most of the executives discussing the Alltone printing plate spoke favorably of it and the improved appearance of the newspaper pages printed from Alltone plates. One or two executives took exception to the improved printing properties of different types over well-made stereotype plates, by way of saying that nearly as good results could be obtained by well-made stereotype plates.

"The whole story, asserted Mr. Gaughan, is that we are trying to get away from mat distortion. I still think we mechanics can take the same product we have and give the necessary time and effort and do a pretty fair job in comparison."

The next question was related to the retouching of editorial picture copy. Chairman Culver declared that the *Star-Telegram* retouches all of its copy and said it is necessary to have correct copy since the background must be taken away from most pictures.

Mr. Harper asserted, "You are putting importance on art work rather than photography. Put a good photographer on the job and you won't need much retouching." He also remarked that some artists go too far with retouching, for instance into the filigree of a dress when a woman's likeness appears in the picture.

Chairman Culver came to the defense of the photographers by explaining that the camera man frequently has to take a shot under conditions as he finds them and that, as a result, retouching is necessary. "We retouch everything," he added.

Mr. Davis said that the air brush is the answer to the retouching problem, while Mr. Hudson declared that the most important thing in a picture is painting in a background to get contrast.

In contrast to the discussion as quoted above, Mr. Gibson asserted that he is opposed to retouching. "The photograph should be reproduced as it has been taken; most retouchers do not know the value of colors. I believe it is the duty of the newspaper to reproduce the picture as it comes in."

Chairman Culver then took issue with Mr. Gibson by pointing out that the newspaper should give its readers the subject in the photograph and not a brick wall which the photographer had to get in the background. He concluded, "The average person thinks a picture is good if there is some separation."

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1 NEWSPAPER MATS — Circle this number and send the post card for test samples of Morley Trutone Mats.

2 ROUTING CUTTERS — Get John Royle catalog 425 on the complete Royle line of routing cutters.

3 CATALOG —American Publishers Supply offers its complete catalog of stereotype equipment and supplies.

4 DRY-MAT— Circle this number for a sample lot of Wood Mats.

5 ZINC—Atlantic Zinc Works will send the booklet, "Getting Down To Zinc Facts" and more information on Zomo Zinc and A-Z Alloy.

6 DRY MAT— Certified offers an informative booklet on plate duplication with dry mats.

7 MASTERFORMER — Sta-Hi Corp. offers a descriptive booklet on the uses of Master Formers on producing, "better printing at lower costs."

8 DRY MAT—Burgess will send samples of Burgess Chrome Mats for newspapers.

Composing Room

9 NUMBERING MACHINES— Wetter offers you a unique booklet, "Numbering for Profit." Send for it.

10 STORAGE RACK — Get details on the Reid Newspaper Storage Rack. Just return the postcard.

11 SLOW SPEED ASSEMBLER —a device which Linotype Parts Company says "will modernize older Linotypes and Intertypes."

12 TELETYPESETTER—will "show you how to increase the size and quality of your paper without increasing production costs."

13 CUT CEMENT — Let Booth Rubber Company give you information on how useful Zink Cut Cement can be to you.

14 TYPE METAL—Imperial Type Metal Company will send you an informative booklet, "Everyday Problems of Type Metal Users and Their Solutions."

15 INTERTYPE — Return the post card for new catalog explaining intertype features.

16 METAL FEEDER— Get information on the advantages and features of the Jordan Metal Feeder.

17 BLUE STREAK—Linotype will give you added particulars on "the way to Blue Streak efficiency."

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19 **LUDLOW** — Send the postal card for the details of the Ludlow story.

20 **SAW** — Circling this number will get you prices and specifications on the Hammond Glider TrimOsaw.

21 **CHALLENGE EQUIPMENT** —Ask for information on Challenge Composing Room Equipment.

22 **SAW TRIMMER** — Get the 8 page catalog on features of the C & G No. 3A Saw Trimmer.

Pressroom

23 **INK** — Geo. H. Morrill Co. asks, "May we show you our colors?" Just send the post card.

24 **PRESS** — ATF asks you to get information about the "profitable performance" of the No. 2 Kelly.

25 **PRESS BLANKETS** —Tingue, Brown & Company will send you specifications on Tingue blankets for every type of service.

26 **OFFSET** — Get particulars on Harris equipment to "complete your pressroom." Just circle this number on the post card.

27 **INK** — Send for IPI's handy Color Guide. Circle this number, you will receive your copy.

28 **PRESS** — Circle this number and mail the post card for the informative booklet "33 Reasons", the story of handwheel impression control.

29 **PAPER** — Champion offers specimens of "a Champion paper for every use." Send for samples of Champion papers for advertising.

30 **AUTOPASTER** — Get the facts on "how the Wood Autopaster will improve quality of newspaper printing, and reduce waste as much as 50%."

31 **KLUGE** — Get up-to-date specifications on Kluge "the press with Quick Getaway."

32 **ROLLERS** — Get details and advantages of synthetic rubber rollers from Dayton Rubber Mfg. Co.

33 **MAGAZINE PRESSES** — Detailed specifications of Goss Anti-Friction Presses will be sent on request.

34 **FOLDER** — Dexter will give you latest specifications of the four models of Cleveland Folders. Just return the postcard.

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35 **KIMBLE ELECTRIC Company** offers a booklet on motors built for the printing industry.

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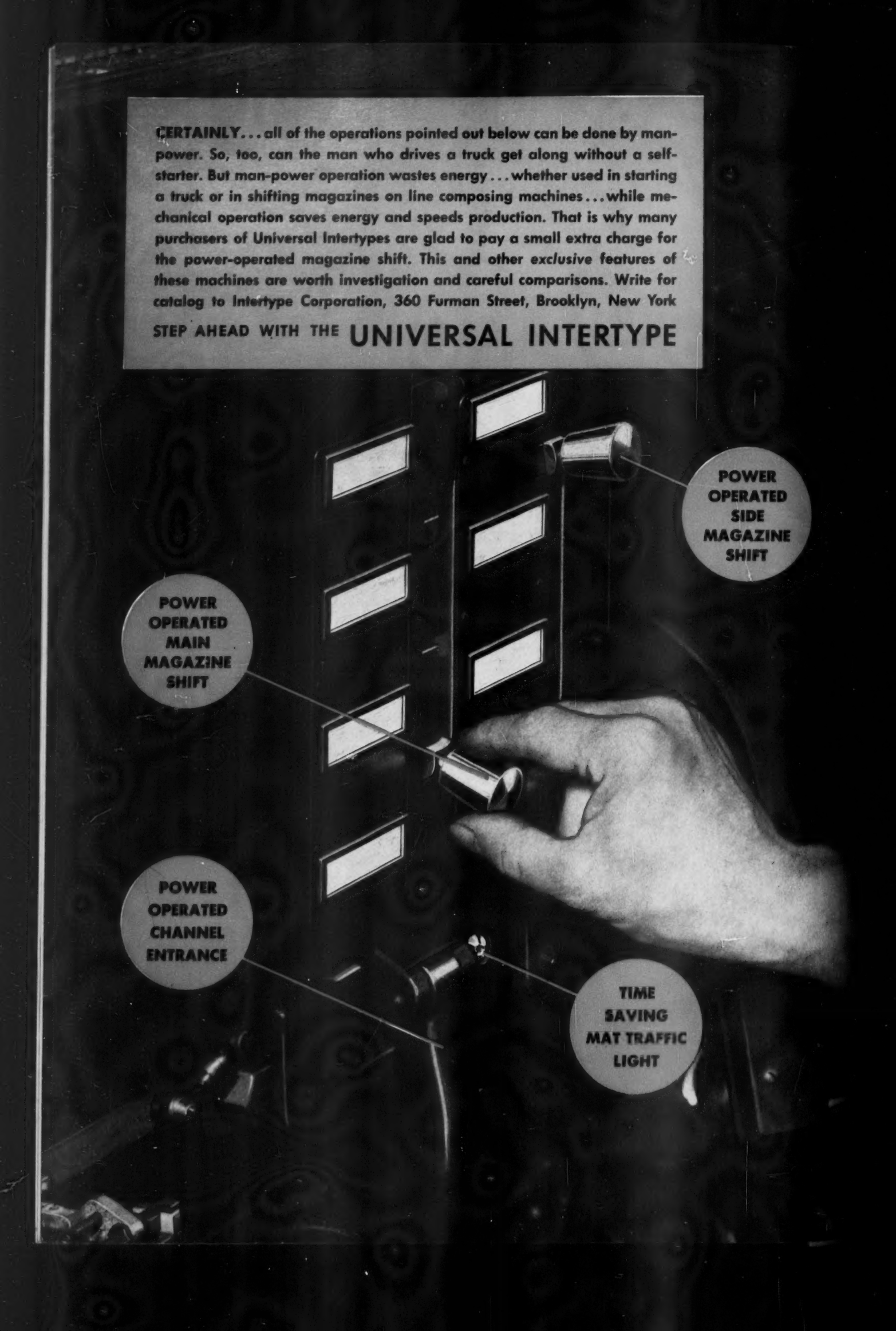
STEP AHEAD WITH THE **UNIVERSAL INTERTYPE**


POWER OPERATED SIDE MAGAZINE SHIFT
POWER OPERATED MAIN MAGAZINE SHIFT
POWER OPERATED CHANNEL ENTRANCE
TIME SAVING MAT TRAFFIC LIGHT